Service Manual

♫ PIONEER®
The Art of Entertainment

DEH-68/UC

HIGH POWER CD PLAYER WITH ID-LOGIC TUNER

DEH-68 UC
DEH-635 UC

HIGH POWER CD PLAYER WITH FM/AM TUNER
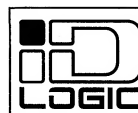
DEH-58 UC
DEH-535 UC
DEH-53 UC

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COMPACT DISC DIGITAL AUDIO

● See the separate manual CX-597(CRT1829) for the CD mechanism description, disassembly and circuit description.

● The CD mechanism employed in this model is one of CX-597 series.

CONTENTS

DEH-68,635,58,535,53

● **CD Player Service Precautions**

1. For pickup unit(CXX1230) handling, please refer to"Disassembly"(CX-597 Service Manual CRT1829). During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).

2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.

3. Please checking the grating after changing the service pickup unit(see page 59).

4. This device employs an inverter as the power supply for the EL. Utmost cars should be used not to suffer from a possible electric shock, accordingly.

1. SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.
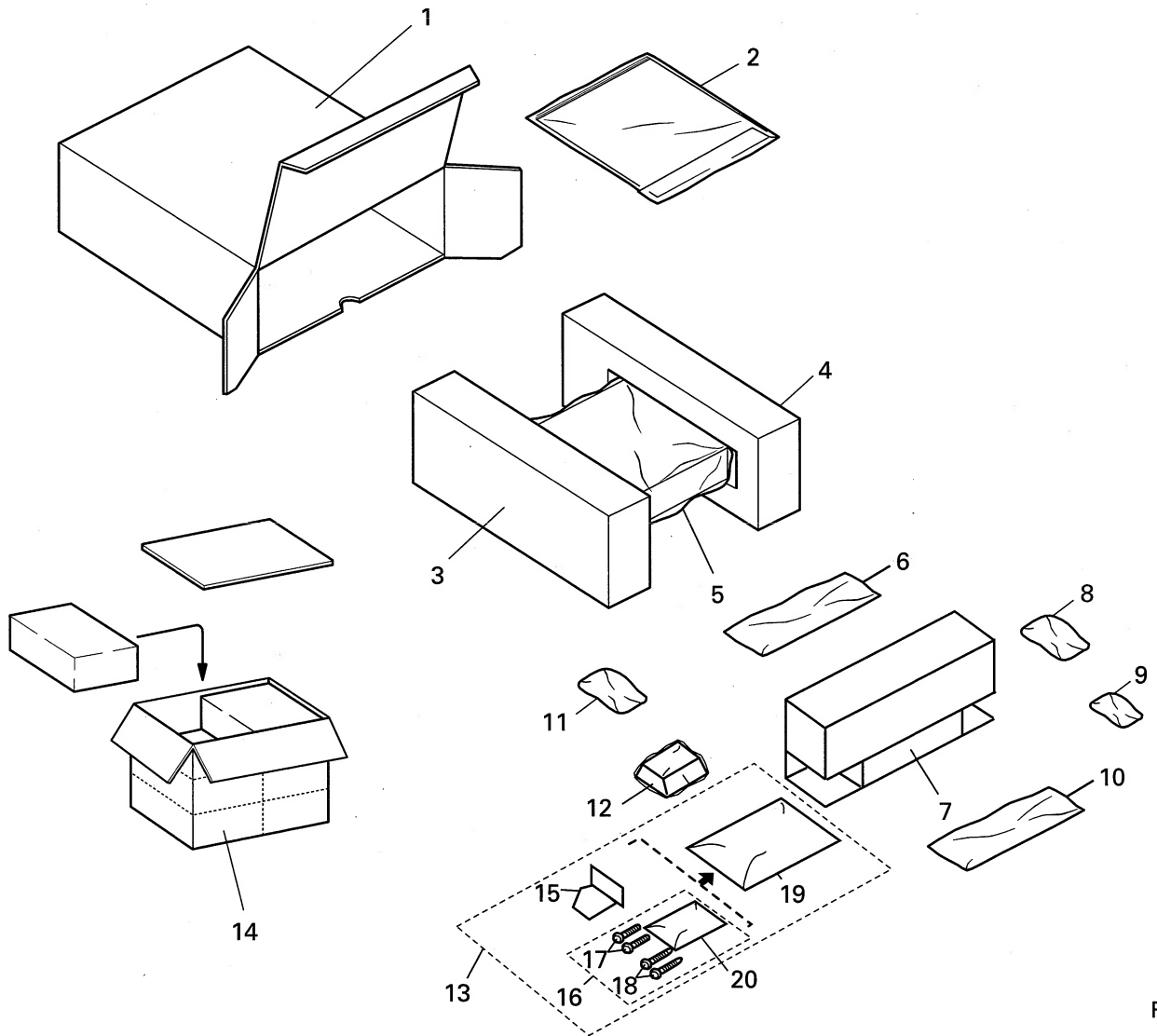
2. EXPLODED VIEWS AND PARTS LIST
2.1 PACKING

Fig. 1

DEH-68,635,58,535,53

NOTE:

● Parts marked by "＊" are generally unavailable because they are not in our Master Spare Parts List.

● Screws adjacent to ▼ mark on the product are used for disassembly.

● **Parts List**

Mark No.	Symbol & Description	Part No.				
		DEH-68/UC	DEH-635/UC	DEH-58/UC	DEH-535/UC	DEH-53/UC
1	Carton	CHG3245	CHG3244	CHG3252	CHG3250	CHG3251
2-1	Owner's Manual	CRD2264	CRD2267	CRD2266	CRD2269	CRD2269
2-2	Installation Manual	CRD2265	CRD2268	CRD2379	CRD2270	CRD2271
＊ 2-3	Label	CRW1343	CRW1343	CRW1343	Not used	Not used
＊ 2-4	Warranty Card	CRY1070	Not used	CRY1070	Not used	Not used
＊ 2-5	Card	Not used	ARY1048	Not used	ARY1048	ARY1048
2-6	Polyethylene Bag	CEG1116	CEG1116	CEG1116	CEG1116	CEG1116
3	Protector	CHP1766	CHP1766	CHP1766	CHP1766	CHP1766
4	Protector	CHP1767	CHP1767	CHP1767	CHP1767	CHP1767
5	Polyethylene Bag	CEG1173	CEG1173	CEG1173	CEG1173	CEG1173
6	Cord Assy	CDE5186	CDE5186	CDE5186	CDE5324	CDE5324
7	Inner Box	CHW1628	CHW1628	Not used	Not used	Not used
8	Remote Control Assy	CXB1160	CXB1160	CXB1225	CXB1225	CXB1225
9	Battery	CEX1006	CEX1006	CEX1030	CEX1030	CEX1030
10	Case Assy	CXB1063	CXB1063	CXB1063	CXB1063	CXB1063
11	Accessory Assy	CEA1918	CEA1918	CEA1918	CEA1918	CEA1918
12	Base Assy	CEA2344	CEA2344	Not used	Not used	Not used
12-1	Polyethylene Bag	CZE3188	CZE3188	Not used	Not used	Not used
＊ 13	Bracket Assy	CEA2346	CEA2346	Not used	Not used	Not used
14	Contain Box	CHL3245	CHL3244	CHL3252	CHL3250	CHL3251
15	Bracket	CZN6467	CZN6467	Not used	Not used	Not used
16	Screw Assy	CZE3198	CZE3198	Not used	Not used	Not used
17	Screw	BPZ30P100FZK	BPZ30P100FZK	Not used	Not used	Not used
18	Screw	BNC40P120FZK	BNC40P120FZK	Not used	Not used	Not used
＊ 19	Polyethylene Bag	CZE3201	CZE3201	Not used	Not used	Not used
＊ 20	Polyethylene Bag	CEG-127	CEG-127	Not used	Not used	Not used

● **Owner's Manual, Installation Manual**

Model	Part No.	Language
DEH-68/UC	CRD2264	English, French
	CRD2265	English, French
DEH-635/UC	CRD2267	English, French
	CRD2268	English, French
DEH-58/UC	CRD2266	English, French
	CRD2379	English, French
DEH-535/UC, DEH-53/UC	CRD2269	English, French, Spanish
DEH-535/UC	CRD2270	English, French, Spanish
DEH-53/UC	CRD2271	English, French, Spanish

● **Accessory Assy**

Accessory Assy CEA1918

Screw Assy CEA1924

Nut
NF50FMC(x2)

Screw
CBA1284

Screw
CRZ50P090FMC(x4)

Screw
CBA-102

Screw
TRZ50P080FMC(x4)

Bush
CNV1009

Handle
CNC5395(x2)

Strap
CNF-111

Spring
CBH-865

Polyethylene Bag
＊ CNM4338

Polyethylene Bag
＊ CEG-158

Fig. 2

DEH-68,635,58,535,53

2.2 EXTERIOR

Fig. 3

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98
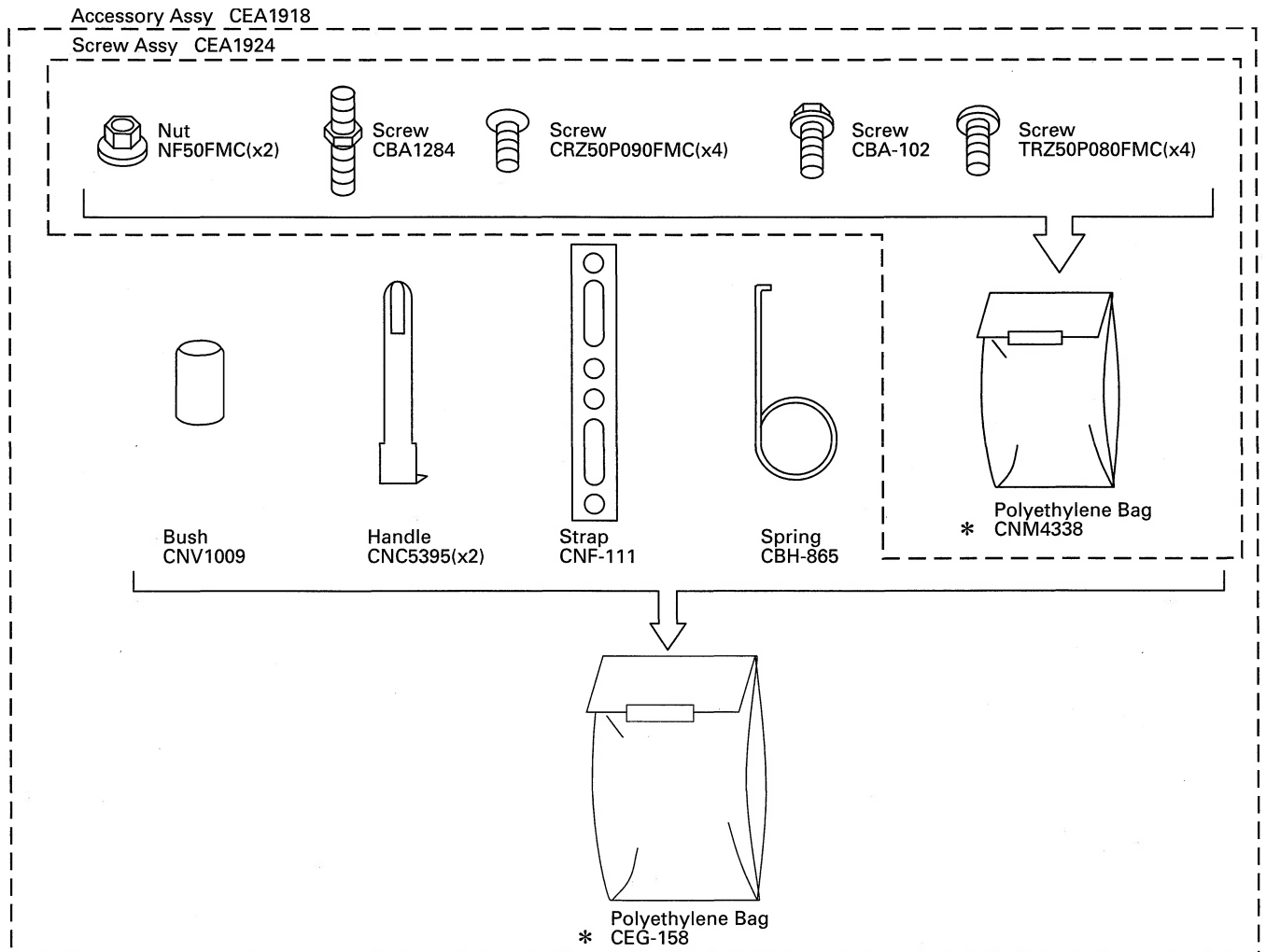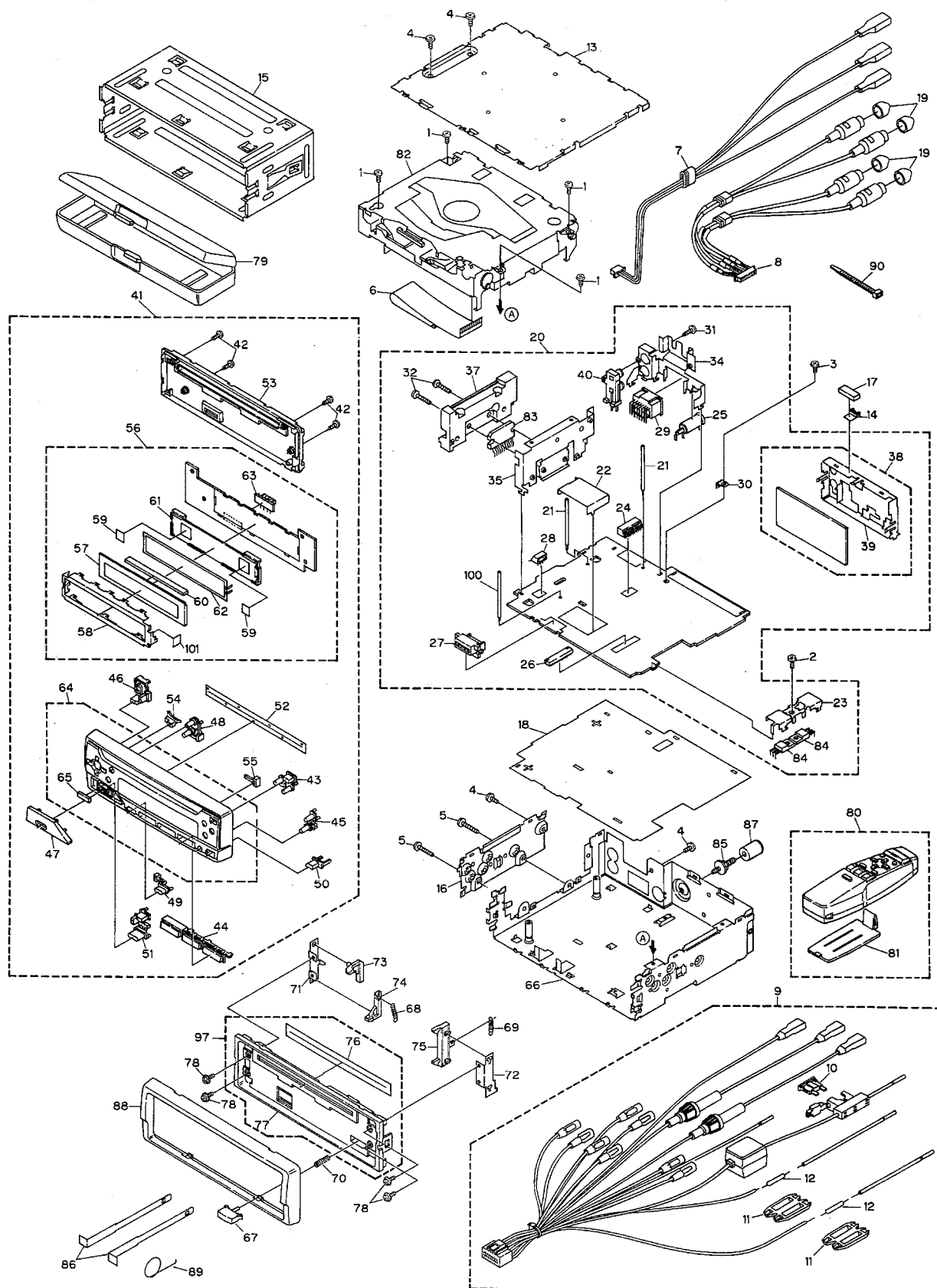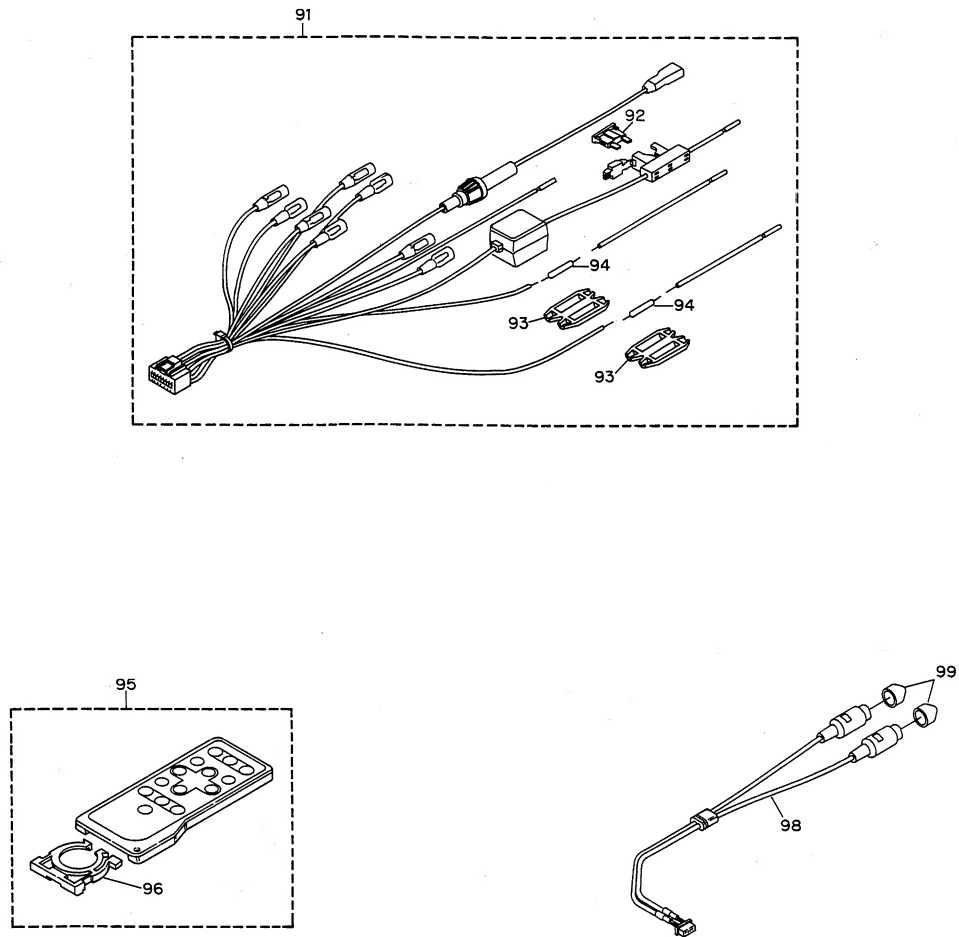
Fig. 4

DEH-68,635,58,535,53

(1)PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BSZ26P050FMC
	2	Screw	ASZ26P080FMC
	3	Screw	BSZ30P055FUC
	4	Screw	BSZ30P060FMC
	5	Screw	BSZ30P180FMC
	6	Cable	CDE4869
	7	Cord Assy	See Contrast table(2)
	8	Cord Assy	See Contrast table(2)
	9	Cord Assy	See Contrast table(2)
	10	Fuse	See Contrast table(2)
	11	Cap	See Contrast table(2)
	12	Resistor	See Contrast table(2)
	13	Case	CNB2119
	14	Holder	CNC6469
	15	Holder	CNC6798
	16	Holder	CNC6862
	17	Cushion	CNM4870
	18	Insulator	CNM5053
	19	Cap	See Contrast table(2)
	20	Tuner Amp Unit	See Contrast table(2)
	21	Clamper	See Contrast table(2)
	22	Holder	CNC5968
	23	Holder	CNC6132
	24	Connector(CN251)	See Contrast table(2)
	25	Antenna Jack(CN502)	CKX1056
	26	Connector(CN651)	CKS2228
	27	Connector(CN801)	CKS3581
	28	Connector(CN851)	See Contrast table(2)
	29	Plug(CN901)	CKM1187
	30	Wrapping Terminal(CN501)	CKF1059
	31	Screw	BPZ26P080FMC
	32	Screw	BSZ26P140FMC
	33	•••••	
	34	Holder	See Contrast table(2)
	35	Holder	CNC7006
	36	•••••	
	37	Heat Sink	CNR1434
	38	FM/AM Tuner Unit	CWE1417
	39	Holder	CNC6555
	40	Pin Jack(CN253)	CKB1028
	41	Detach Grille Assy	See Contrast table(2)
	42	Screw	BPZ20P100FZK
	43	Button(EJECT)	CAC4875
	44	Button(1-6)	CAC4876
	45	Button(PGM)	See Contrast table(2)
	46	Button(∧, <)	CAC4878
	47	Button(VOLUME)	CAC4879
	48	Button(A, F)	CAC4880
	49	Button(BAND)	CAC4881
	50	Button(DETACH)	CAC4883
	51	Button(SOURCE)	CAC5021
	52	Cover	CNM4704
	53	Cover	CNS4208
	54	Lighting Conductor	CNV4799
	55	Lighting Conductor	CNV4800
	56	Keyboard Unit	See Contrast table(2)
	57	LCD	CAW1393
	58	Holder	CNC6864
	59	Film	CNM4349
	60	Connector	CNV4770
	61	Housing	CNV4797
	62	EL(IL1801)	CEL1489
	63	Connector(CN1801)	CKS3580
	64	Grille Unit	See Contrast table(2)
	65	Cushion	CNM5156
	66	Chassis Unit	See Contrast table(2)
	67	Button	CAC5180
	68	Spring	CBH1834
	69	Spring	CBH1835
	70	Spring	CBH1996
	71	Bracket	CNC6135
	72	Bracket	CNC6791
	73	Arm	CNV4692
	74	Arm	CNV4693
	75	Arm	CNV4951
	76	Cover	CNM4875
	77	Panel	See Contrast table(2)
	78	Screw	IMS20P030FZK
	79	Case Assy	CXB1063
	80	Remote Control Assy	See Contrast table(2)
	81	Battery Cover	See Contrast table(2)
	82	CD Mechanism Module	CXK5001
	83	IC(IC201)	TDA7386
	84	Transistor(Q951, 971)	2SD2396
	85	Screw	CBA1284
	86	Handle	CNC5395
	87	Bush	CNV1009
	88	Panel	CNS4200
	89	Spring	CBH-865
*	90	Lock Tie	See Contrast table(2)
	91	Cord Assy	See Contrast table(2)
	92	Fuse	See Contrast table(2)
	93	Cap	See Contrast table(2)
	94	Resistor	See Contrast table(2)
	95	Remote Control Unit	See Contrast table(2)
	96	Cover	See Contrast table(2)
	97	Panel Unit	See Contrast table(2)
	98	Cord Assy	See Contrast table(2)
	99	Cap	See Contrast table(2)
	100	Clamper	See Contrast table(2)
*	101	Spacer	CNM5379

(2) CONTRAST TABLE

DEH-68/UC, DEH-635/UC, DEH-58/UC, DEH-535/UC and DEH-53/UC have the same construction except for the following:

Mark No.	Symbol & Description	Part No.				
		DEH-68/UC	DEH-635/UC	DEH-58/UC	DEH-535/UC	DEH-53/UC
7	Cord Assy	CDE5184	Not used	CDE5184	Not used	Not used
8	Cord Assy	CDE5210	Not used	CDE5210	Not used	Not used
9	Cord Assy	CDE5186	CDE5186	CDE5186	Not used	Not used
10	Fuse(10A)	CEK1136	CEK1136	CEK1136	Not used	Not used
11	Cap	CNS1472	CNS1472	CNS1472	Not used	Not used
12	Resistor	RS1/2P102JL	RS1/2P102JL	RS1/2P102JL	Not used	Not used
19	Cap	CNV2680	Not used	CNV2680	Not used	Not used
20	Tuner Amp Unit	CWM5002	CWM5003	CWM5006	CWM5007	CWM5008
21	Clamper	CEF1009	CEF1009	CEF1009	CEF1009	Not used
24	Connector	CKS3602(CN251)	CKS3598(CN255)	CKS3602(CN251)	CKS3598(CN255)	Not used
28	Connector(CN851)	CKS3597	Not used	CKS3597	Not used	Not used
34	Holder	CNC6887	CNC6886	CNC6887	CNC6886	CNC6888
41	Detach Grille Assy	CXA9612	CXA9613	CXA9616	CXA9617	CXA9618
45	Button	CAC4877	CAC4877	CAC5079	CAC5079	CAC5079
56	Keyboard Unit	CWM5012	CWM5013	CWM5016	CWM5017	CWM5018
64	Grille Unit	CXA9700	CXA9760	CXA9765	CXA9762	CXA9764
66	Chassis Unit	CXA9659	CXA9662	CXA9659	CXA9662	CXA9662
77	Panel	CNS4451	CNS4451	CNS4450	CNS4209	CNS4209
80	Remote Control Assy	CXB1160	CXB1160	Not used	Not used	Not used
81	Battery Cover	CNS4406	CNS4406	Not used	Not used	Not used
* 90	Lock Tie	CNV-754	Not used	CNV-754	Not used	Not used
91	Cord Assy	Not used	Not used	Not used	CDE5324	CDE5324
92	Fuse(10A)	Not used	Not used	Not used	CEK1136	CEK1136
93	Cap	Not used	Not used	Not used	CNS1472	CNS1472
94	Resistor	Not used	Not used	Not used	RS1/2P102JL	RS1/2P102JL
95	Remote Control Unit	Not used	Not used	CXB1225	CXB1225	CXB1225
96	Cover	Not used	Not used	CNS4139	CNS4139	CNS4139
97	Panel Unit	Not used	Not used	CXB1284	CXB1401	CXB1401
98	Cord Assy	Not used	CDE5208	Not used	CDE5208	Not used
99	Cap	Not used	CNV2680	Not used	CNV2680	Not used
100	Clamper	CEF1009	Not used	CEF1009	Not used	Not used

2.3 CD MECHANISM MODULE
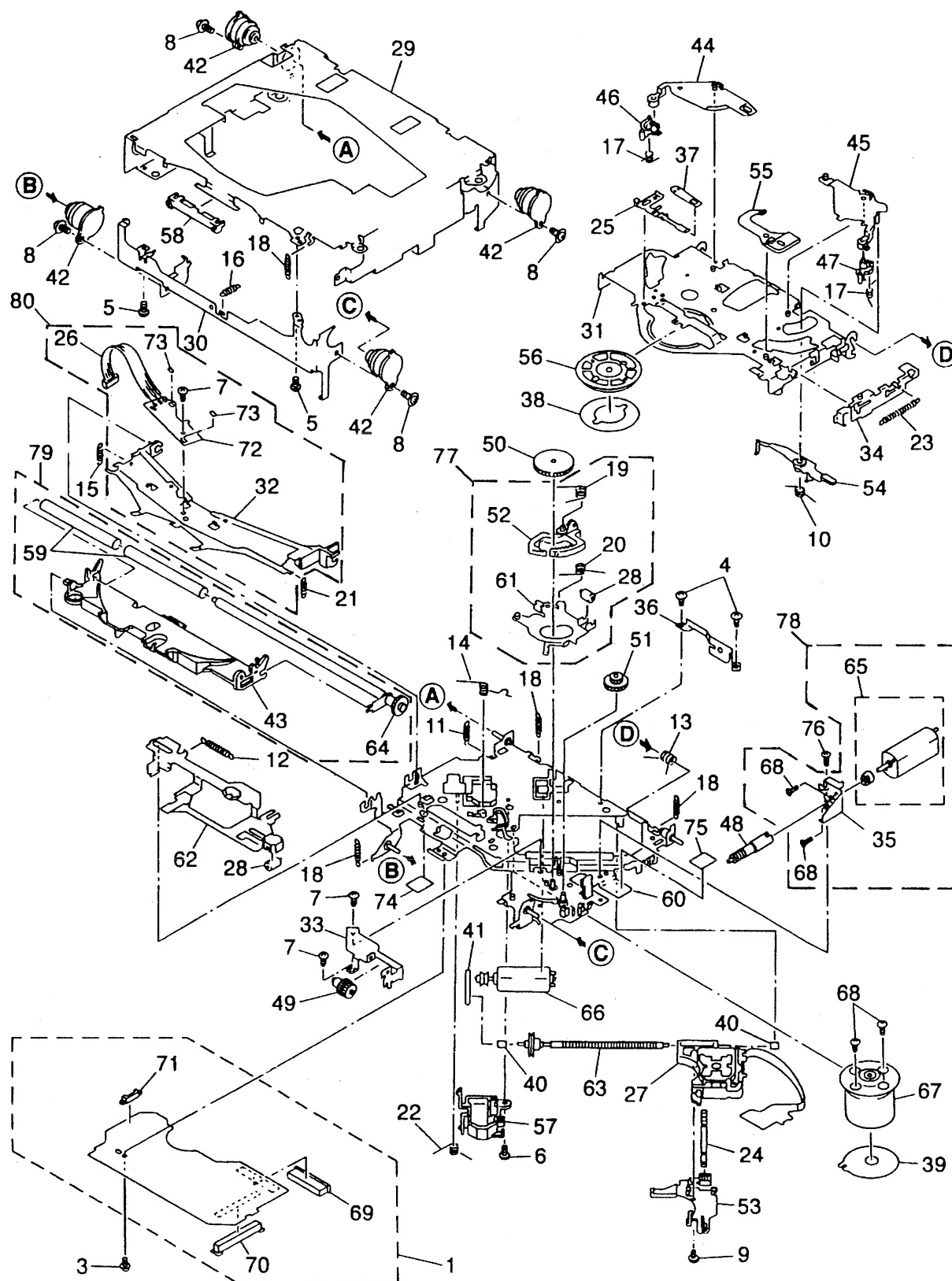
Fig. 5

● Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Control Unit	CWX1889	46	Arm	CNV4124
2	•••••		47	Arm	CNV4125
3	Screw	IMS26P035FMC	48	Gear	CNV4128
4	Screw	BMZ20P040FMC	49	Gear	CNV4129
5	Screw	BSZ20P040FMC	50	Gear	CNV4130
6	Screw(M2×3)	CBA1077	51	Gear	CNV4131
7	Screw(M2×2)	CBA1250	52	Arm	CNV4136
8	Screw(M2×5)	CBA1296	53	Holder	CNV4663
9	Screw(M2×3.85)	CBA1362	54	Arm	CNV4138
10	Spring	CBH1945	55	Arm	CNV4139
11	Spring	CBH1724	56	Clamper	CNV4140
12	Spring	CBH1939	57	Holder	CNV4664
13	Spring	CBH1729	58	Guide	CNV4484
14	Spring	CBH1730	59	Roller	CNV4509
15	Spring	CBH1731	60	Chassis Unit	CXA9515
16	Spring	CBH1732	61	Arm Unit	CXA8565
17	Spring	CBH1736	62	Lever Unit	CXA9300
18	Spring	CBH1745	63	Screw Unit	CXA8699
19	Spring	CBH1832	64	Gear Unit	CXA8701
20	Spring	CBH1833	65	Load Motor Unit(M3)	CXA8702
21	Spring	CBH1848	66	CRG Motor Unit(M2)	CXA8986
22	Spring	CBH1849	67	Motor Unit(M1)	CXA8912
23	Spring	CBH1863	68	Screw	JFZ20P025FMC
24	Spring	CBL1214	69	Connector(CN101)	CKS1953
25	Spring	CBL1269	70	Connector(CN701)	CKS2774
26	Connector(CN1)	CDE4576	71	Connector(CN801)	CKS2196
27	Pickup Unit(Service)	CXX1230	* 72	Gathering PCB	CNX2445
28	Roller	CLA2627	73	Photo-transistor(Q1, 2)	CPT-230S-X
29	Frame	CNC5796	74	Sheet	CNM4873
30	Frame	CNC5797	75	Cushion	CNM3917
31	Arm	CNC5799	76	Screw	BMZ20P025FMC
32	Arm	CNC5801	77	ELBO Arm Assy	CXA8889
33	Bracket	CNC5871	78	Load Motor Assy	CXA8891
34	Lever	CNC6054	79	LO Arm Assy	CXA8892
35	Bracket	CNC6056	80	Guide Arm Assy	CXA8893
* 36	Bracket	CNC6376			
37	Spacer	CNM3315			
38	Sheet	CNM4849			
39	PCB	CNP4230			
40	Bearing	CNR1415			
41	Belt	CNT1071			
42	Damper	CNV3974			
43	Arm	CNV4120			
44	Arm	CNV4122			
45	Arm	CNV4123			

DEH-68,635,58,535,53

3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)
(DEH-68/UC, 635/UC, 58/UC)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".
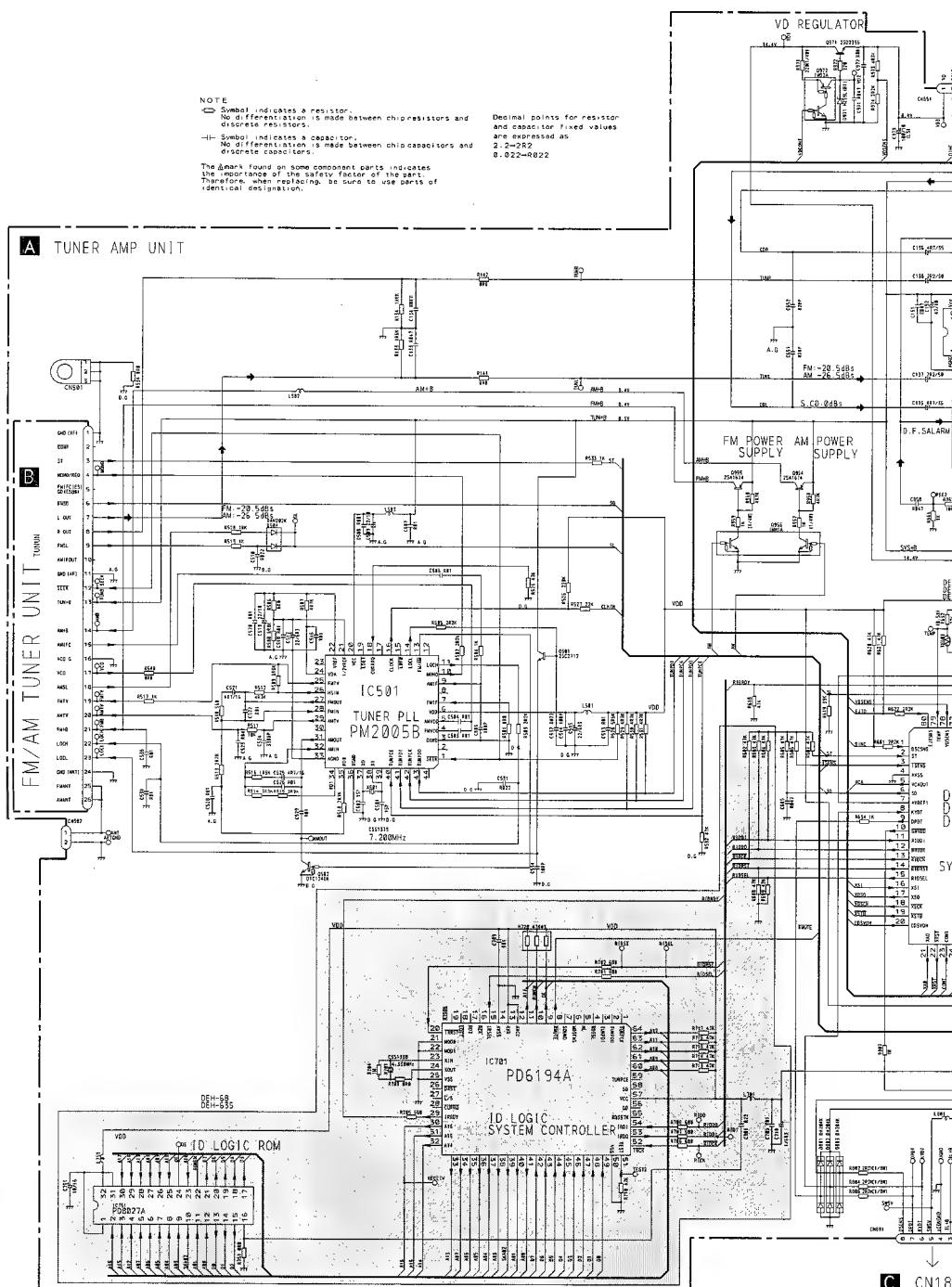
A-b

Fig. 6

Fig. 7

DEH-68,635,58,535,53

Fig. 8

DEH-68,635,58,535,53

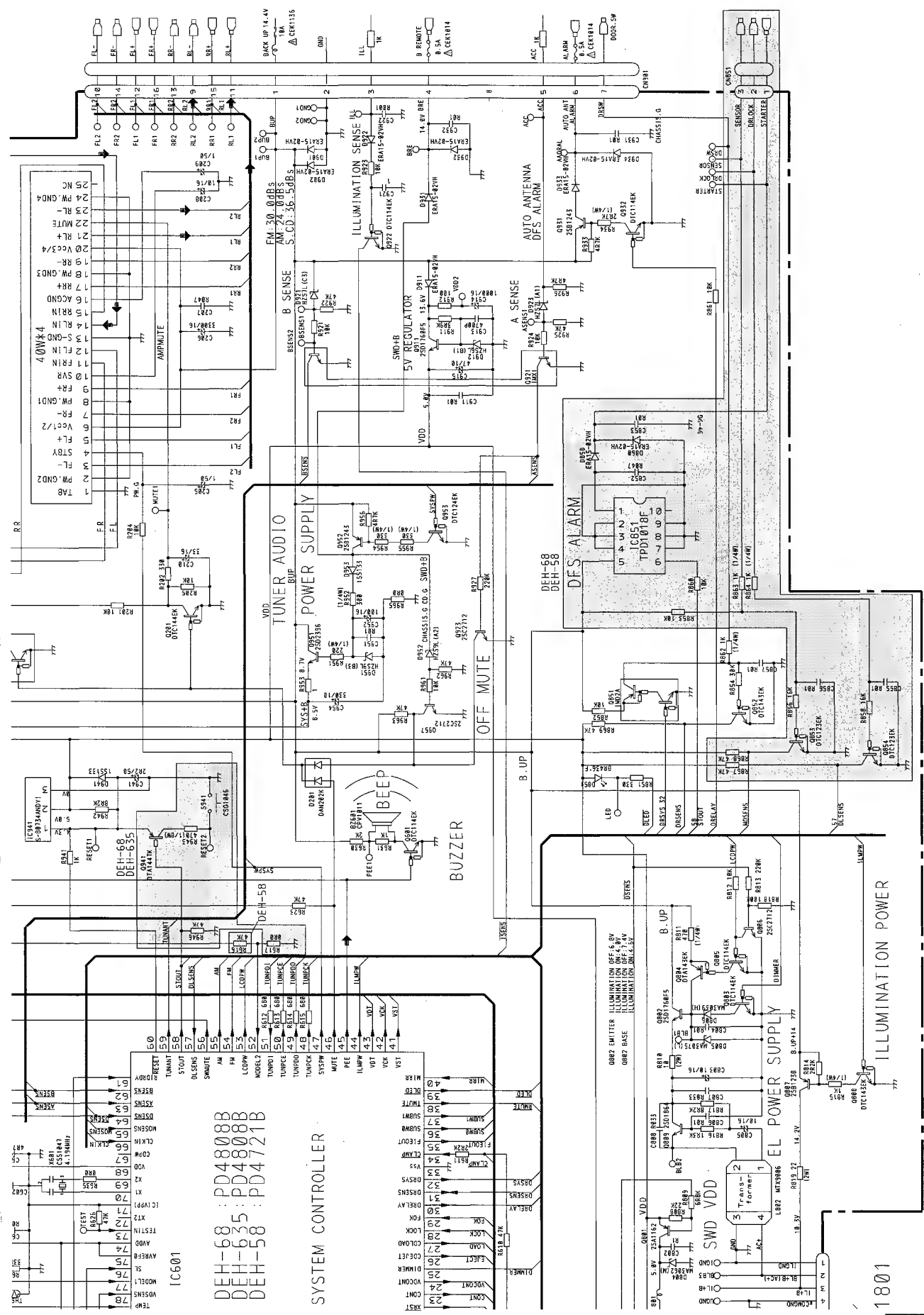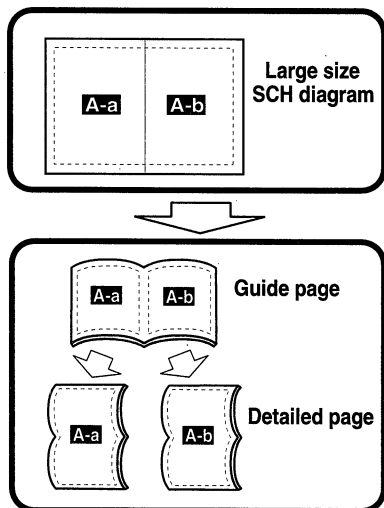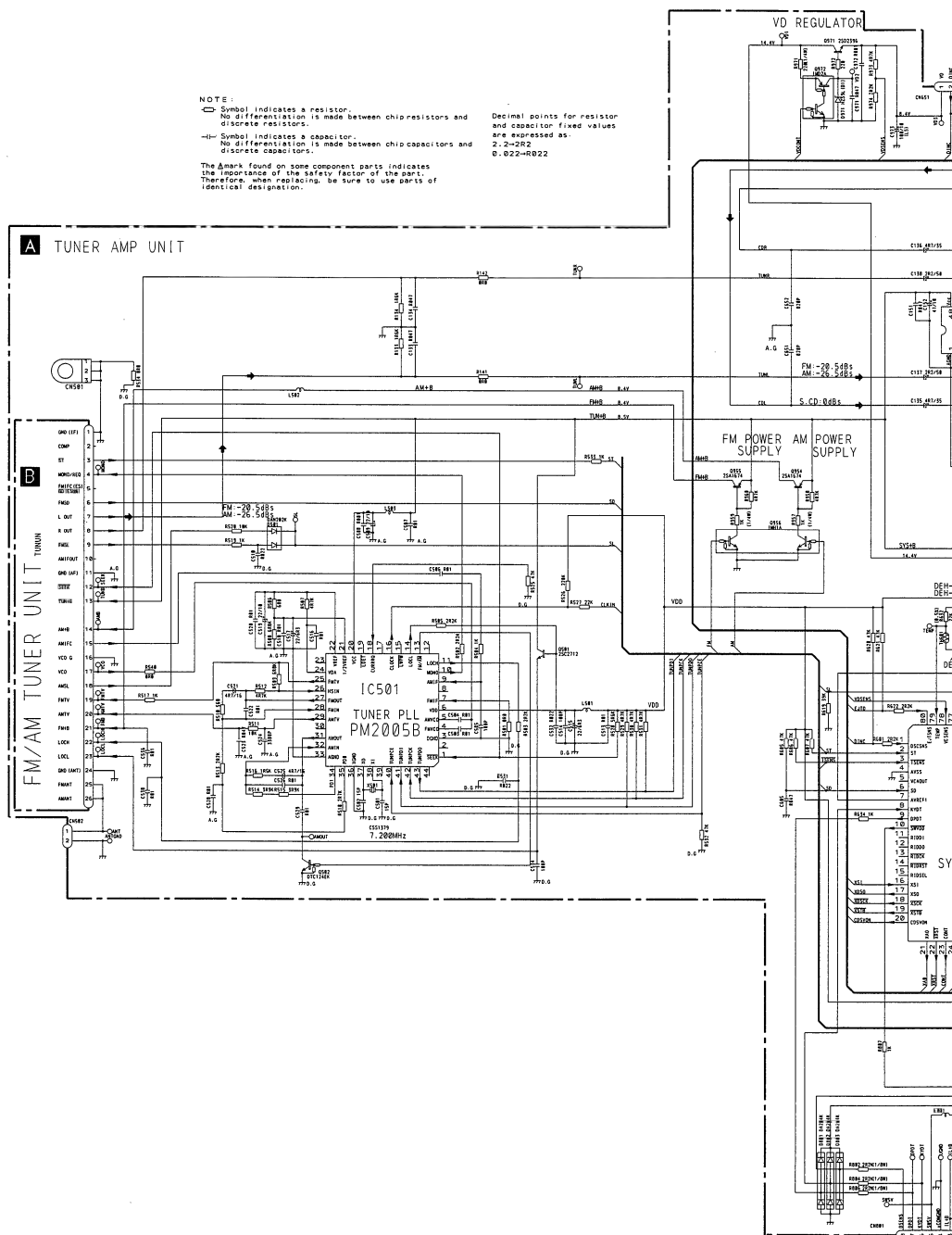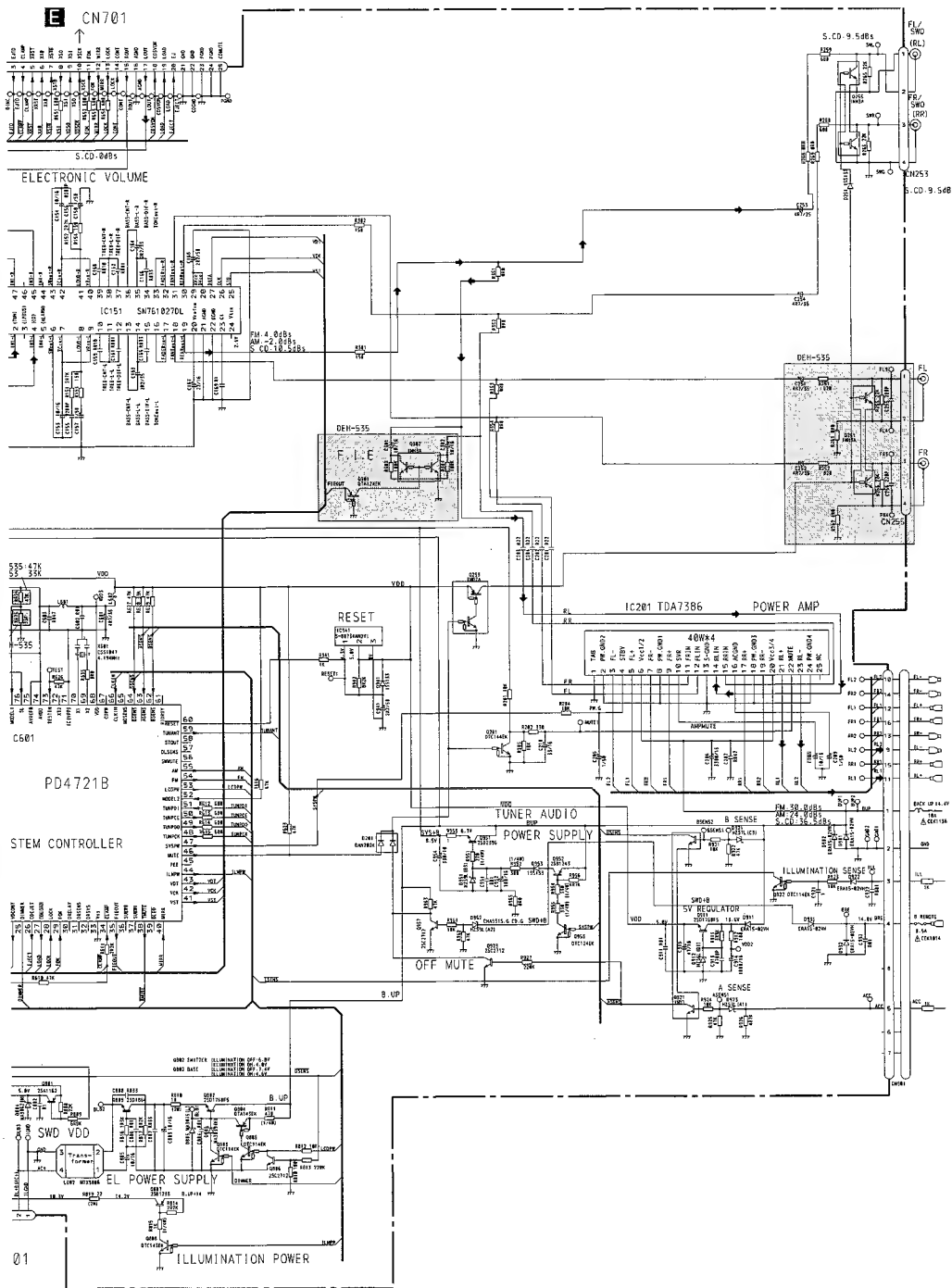## 3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)(DEH-535/UC, 53/UC)

A-b

Fig. 9

DEH-68,635,58,535,53

VD REGULATOR

FM POWER AM POWER SUPPLY
FM POWER SUPPLY

TUNER AMP UNIT

TUNER UNIT

NOTE: Symbol indicates a resistor.
No differentiation is made between chip resistors and
discrete resistors.

Symbol indicates a capacitor.
No differentiation is made between chip capacitors and
discrete capacitors.

The △mark found on some component parts indicates
the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of
identical designation.

Decimal points for resistor
and capacitor fixed values
are expressed as:
2.2→2R2
0.022→R022

FM:-20.5dBs
AM:-26.5dBs
S.CD.0dBs

CN501

1 GND (IF)
2 COMP
3 ST
4 MONO/REQ
5 FMIFC (IF5)
6 FM50
7 L OUT
8 R OUT
9 FMSL
10 AMIFOUT
11 GND (AF)
12 SEEK
13 TUNB
14 AMHB
15 AMIFC
16 VCO G
17 VCO

Fig. 10

DEH-68,635,58,535,53

A-a

21

A-b | A-a

POWER AMP

IC201 TDA7386

40W×4

RESET

ELECTRONIC VOLUME

IC151 SN761027DL

CN701

A-b

Fig. 11

3.3 CD MECHANISM MODULE(GUIDE PAGE)

E-b

Fig. 12

DEH-68,635,58,535,53

SWITCHES:
CONTROL UNIT
S801 : HOME SWITCH .... ON–OFF
S802 : CLAMP SWITCH .... ON–OFF
The underlined indicates the switch position.

Fig. 13

Fig. 14

DEH-68,635,58,535,53

Note:1. The encircled numbers denote measuring pointes in the circuit diagram.
2. Reference voltage
REFO:2.5V

● **Waveforms**

① RFO 0.5V/div. 0.5μs/div. Normal mode: play	① CH1: RFO 1V/div. ② CH2: MIRR 5V/div. 0.5ms/div. Test mode: Tracking open	① CH1: RFO 1V/div. ② CH2: MIRR 5V/div. 0.5ms/div. Nomal mode: The defect part passes 800μm
③ CH1: FIN 0.5V/div. ④ CH2: FO+ 2V/div. 0.2s/div. Test mode: No disc, Focus close	③ CH1: FIN 0.5V/div. ⑤ CH2: FOK 2V/div. 0.2s/div. Normal mode: Focus close	⑥ CH1: FEY 0.5V/div. ⑦ CH2: XSI 2V/div. 1ms/div. Normal mode: Focus close
⑧ CH1: TEY 0.5V/div. ⑨ CH2: TIN 0.5V/div. 0.5ms/div. Test mode: 32 tracks jump (FWD)	⑧ CH1: TEY 0.5V/div. ⑨ CH2: TIN 0.5V/div. 0.5ms/div. Test mode: Single jump (FWD)	⑧ CH1: TEY 0.5V/div. ⑨ CH2: TIN 0.5V/div. 5ms/div. Test mode: 100 tracks jump (FWD)
⑥ CH1: FEY 0.1V/div. ③ CH2: FIN 0.2V/div. 20ms/div. Normal mode: Play	③ CH1: FIN 0.5V/div. ⑩ CH2: SIN 1V/div. 0.5s/div. Normal mode: Focus close (12cm)	③ CH1: FIN 0.5V/div. ⑩ CH2: SIN 1V/div. 0.5s/div. Normal mode: Focus close (8cm)

⑧ CH1: TEY   0.2V/div.
⑨ CH2: TIN   0.2V/div.   20ms/div.
Normal mode: play

REFO →

REFO →

⑧ CH1: TEY   0.5V/div.
⑪ CH2: SD   0.5V/div.   5ms/div.

REFO →

REFO →

⑩ SIN   0.5V/div.   0.1s/div.
Normal mode: Play (12cm)

REFO →

⑩ SIN   0.5V/div.   10ms/div.
Long Search (12cm)

REFO →

⑫ EFM   1V/div.   5μs/div.
Play

REFO →

GND →

⑧ CH1: TEY   1V/div.
⑬ CH2: TEC   1V/div.   2ms/div.
Test mode: Focus close
                Tracking open

REFO →

REFO →

⑧ CH1: TEY   0.5V/div.
⑥ CH2: FEY   0.5V/div.   0.2s/div.
Normal mode: AGC after focus close

ROL

REFO →

REFO →

⑭ PLCK   2V/div.   0.5μs/div.
Play

REFO →

GND →

⑮ SCKO   2V/div.   1μs/div.
Play

REFO →

GND →

⑯ Dout   2V/div.   10μs/div.
Play

REFO →

GND →

⑰ LRCK   2V/div.   20μs/div.

REFO →

GND →

⑱ VD   5V/div.   50ms/div.
Normal mode: No disc

GND →

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DEH-68,635,58,535,53

⑲ CH1: R OUT 1V/div. ⑳ CH2: L OUT 1V/div. 0.2ms/div. Normal mode: Play (1kHz 0dB)	⑥ CH1: FEY 0.2V/div. ③ CH2: FIN 0.5V/div. 1ms/div. Normal mode: During AGC	⑧ CH1: TEY 0.2V/div. ⑨ CH2: TIN 0.5V/div. 1ms/div. Normal mode: During AGC
REFO → REFO →	REFO → REFO →	REFO → REFO →

① CH1: RFO 1V/div. ㉑ CH2: HOLD 5V/div. 0.5ms/div. Normal mode: The defect part passes 800μm	③ CH1: FIN 1V/div. ㉑ CH2: HOLD 5V/div. 0.5ms/div. Normal mode: The defect part passes 800μm	
GND →	GND →	

DEH-68,635,58,535,53

3.4 KEYBOARD UNIT

KEYBOARD UNIT

LCD CAW1393

LCD, 1/4Duty, 1/3Bias

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 |

COM3 COM2 COM1 COM0 SEG39 SEG38 SEG37 SEG36 SEG35 SEG34 SEG33 SEG32 SEG31 SEG30 SEG29 SEG28 SEG27 SEG26 SEG25 SEG24 SEG23 SEG22 SEG21 SEG20 SEG19 SEG18 SEG17 SEG16 SEG15 SEG14 SEG13 SEG12 SEG11 SEG10 SEG9 SEG8 SEG7 SEG6 SEG5 SEG4 SEG3 SEG2 SEG1 SEG0

05 2R2

KST0 R1850 1K
KST1 R1845 1K
KST2 R1846 1K
KST3 R1851 1K
KST4 R1852 1K
KST5 R1806 1K
KDT3 R1847 1K
KDT2
KDT1 R1807 1K
KDT0 R1849 1K

REM 17
DPDT 18
19 RST
20 KYDT
21 MODA
22 XO
23 XI
24 VSS
25 KDT2
26 KDT3
27 KST5
28 KST4
SEG39 29
SEG38 30
SEG37 31
SEG36 32

3 ⊏◻⊐ 1
2 X1801
CSS1312
4.97MHz

IC1801 PD6196A

LCD DRIVER

KDT1 16
KDT0 15
KST0 14
KST1 13
KST2 12
KST3 11
LCDB 10
COM0 9
COM1 8
COM2 7
COM3 6
SEG0 5
SEG1 4
SEG2 3
SEG3 2
SEG4 1

64 SEG5
63 SEG6
62 SEG7
61 SEG8
60 SEG9
59 SEG10
58 SEG11
57 SEG12
56
55 SEG13
54 SEG14
53 SEG15
52 SEG16
51 SEG17
50 SEG18
49 SEG19

SEG7
SEG8
SEG9
SEG10
SEG11
SEG12
VDD
SEG13
SEG14
SEG15
SEG16
SEG17

33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

SEG35 SEG34 SEG33 SEG32 SEG31 SEG30 SEG29 SEG28 SEG27 SEG26 SEG25 SEG24 SEG23 SEG22 SEG21 SEG20

Fig. 15

C

35

3.5 FM/AM TUNER UNIT

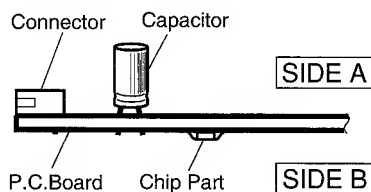IT

AM DET

Fig. 16

B 37

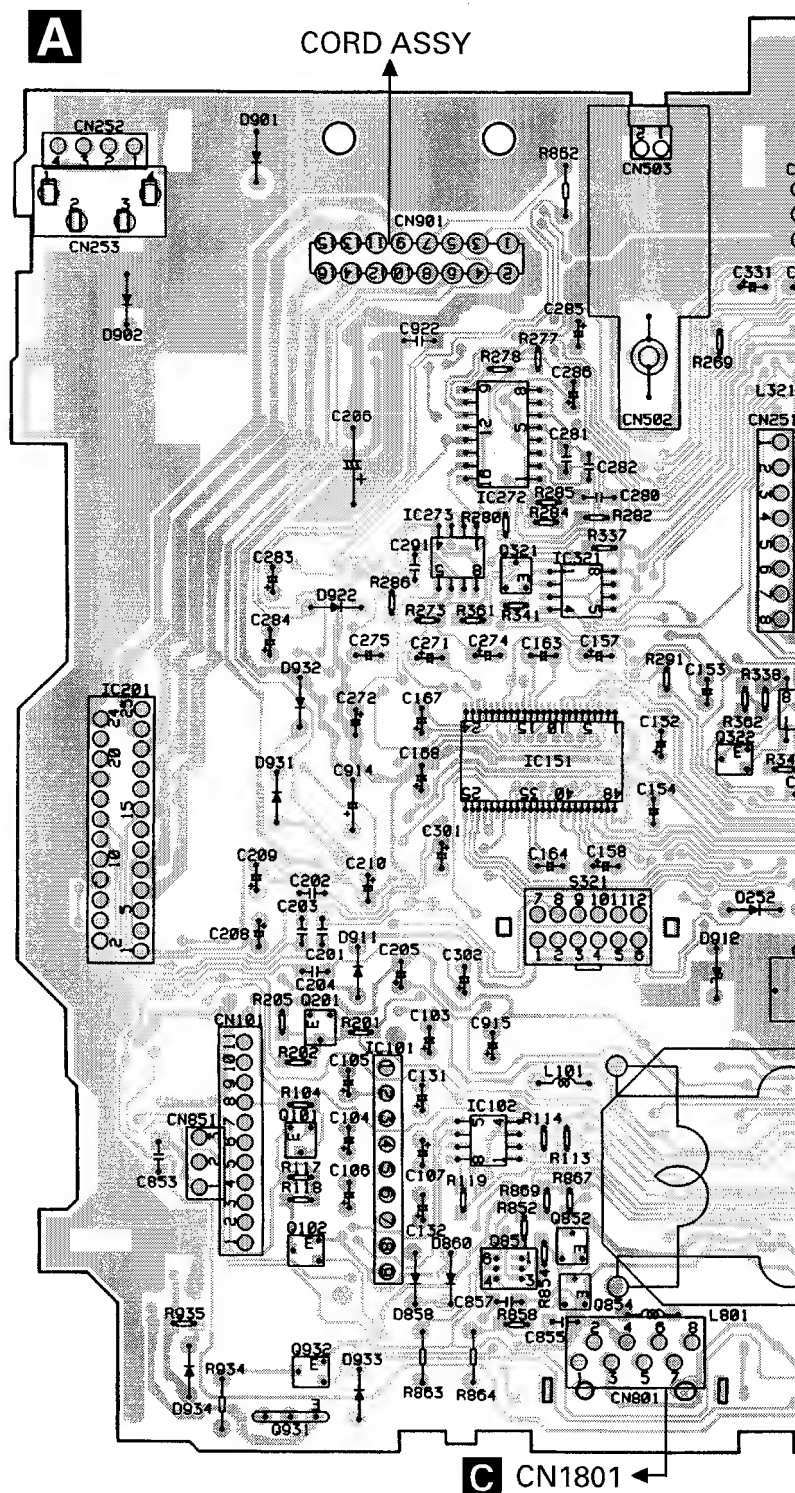# DEH-68,635,58,535,53

4. PCB CONNECTION DIAGRAM

4.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams

SIDE A

SIDE B

Connector Capacitor

P.C.Board Chip Part

CORD ASSY

A

C CN1801 ◄

SIDE A
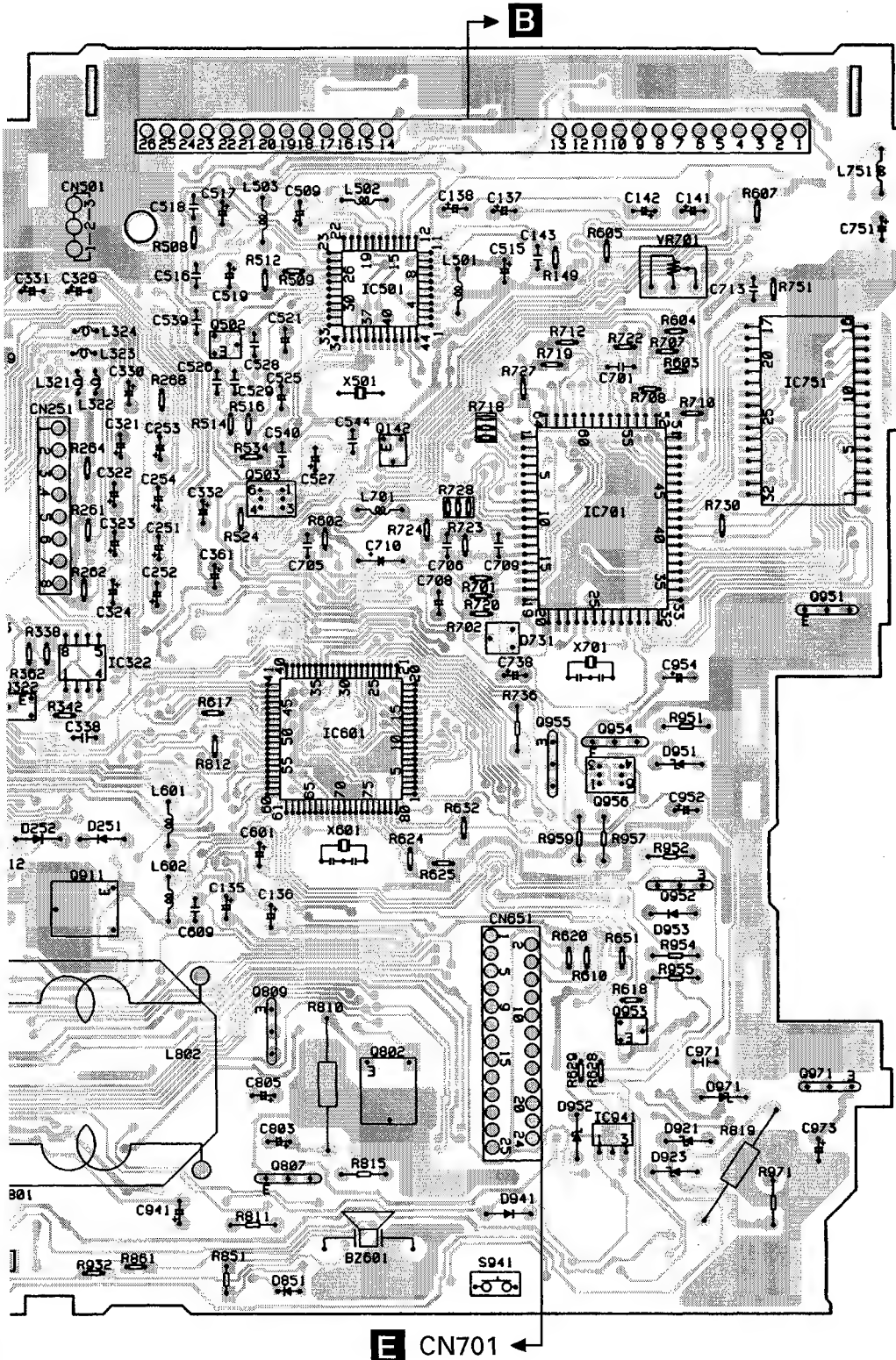
Fig. 17

A

IC.Q

SIDE B

Q501
Q143 Q144

Q141
Q701

Q255

Q252
IC324
IC731 IC274
Q251
Q922

Q324 IC271

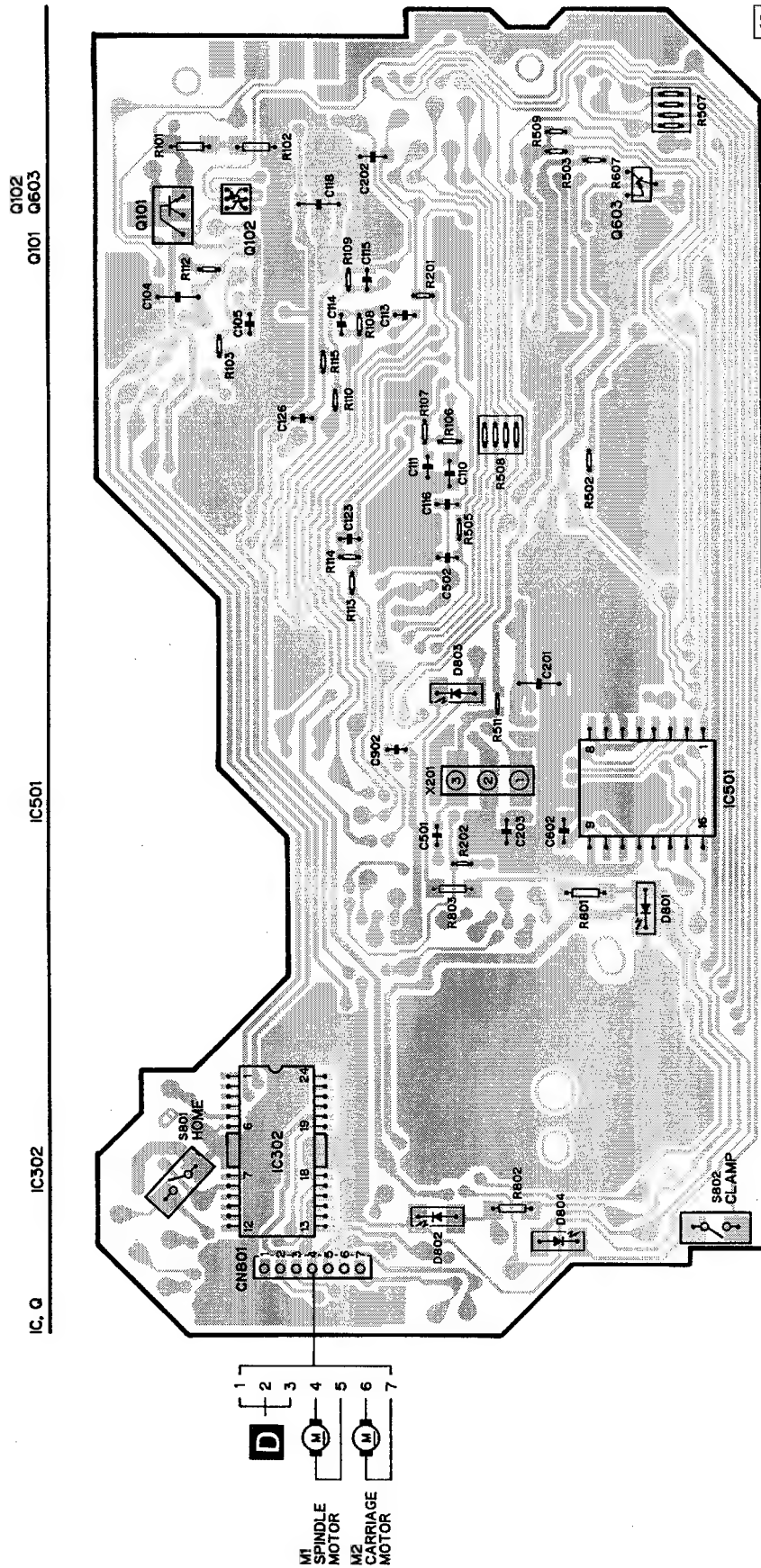IC732
IC323

IC702

Q323

Q301

Q302

Q253

Q806
Q254 Q853

Q808
Q803
Q801
Q972 Q102
Q805
Q923
Q941 Q804
Q957 Q601

Q921

Fig. 18

A

41

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4.2 CD MECHANISM MODULE

SIDE A

CONTROL UNIT

PICKUP UNIT

M3 LOADING MOTOR

CN651

DETECTOR PCB

CN801

Fig. 19

42

SIDE B

E CONTROL UNIT

IC, Q   IC302   IC501   Q101   Q102
                                                       Q102   Q603

D

1
2
3
4 M M1 SPINDLE MOTOR
5
6 M M2 CARRIAGE MOTOR
7

Fig. 20

E   43

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4.3 KEYBOARD UNIT

SIDE A

Fig. 21

SIDE B

IC.0   IC1801

A CN801

C

Fig. 22

C   45

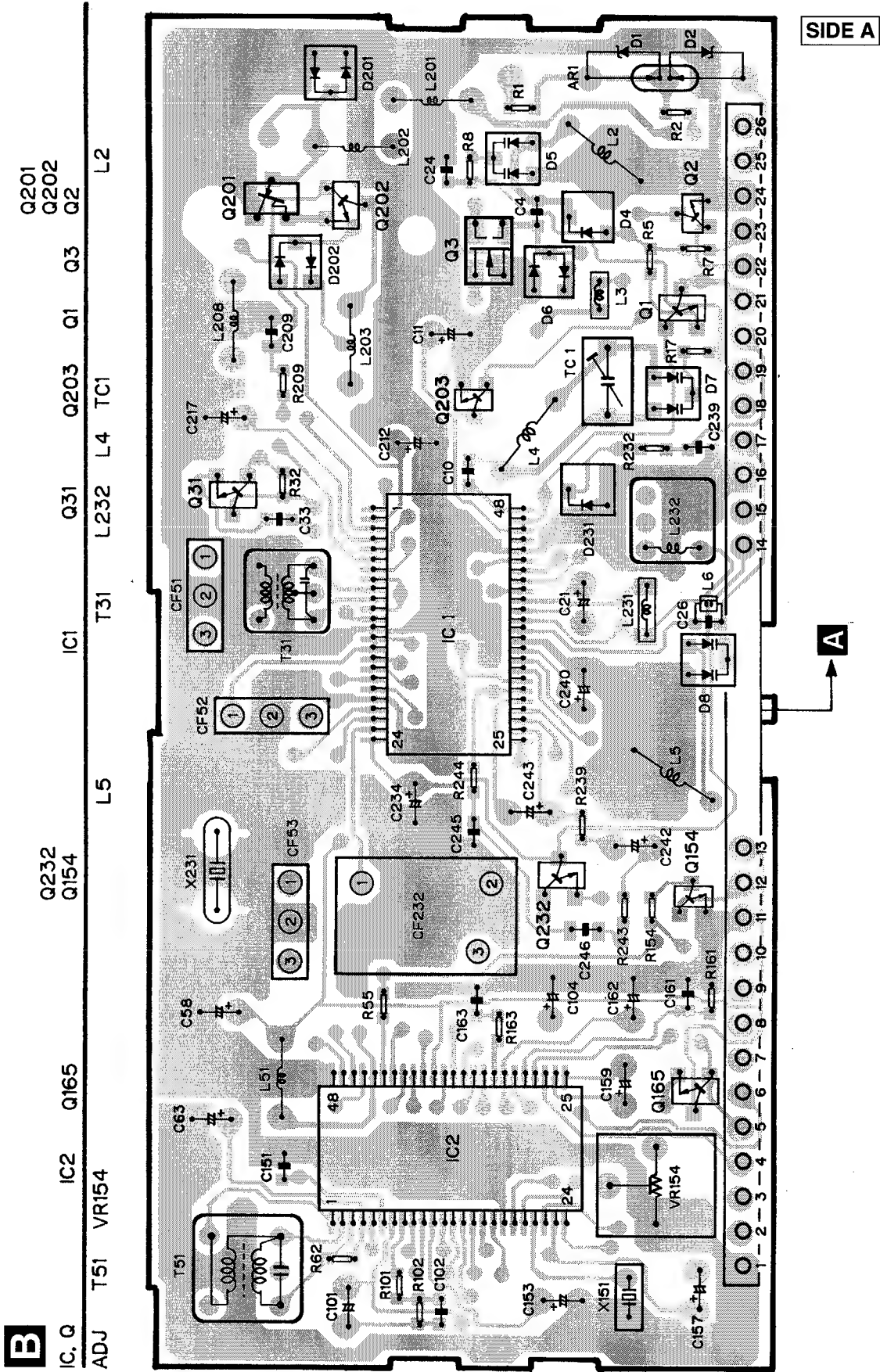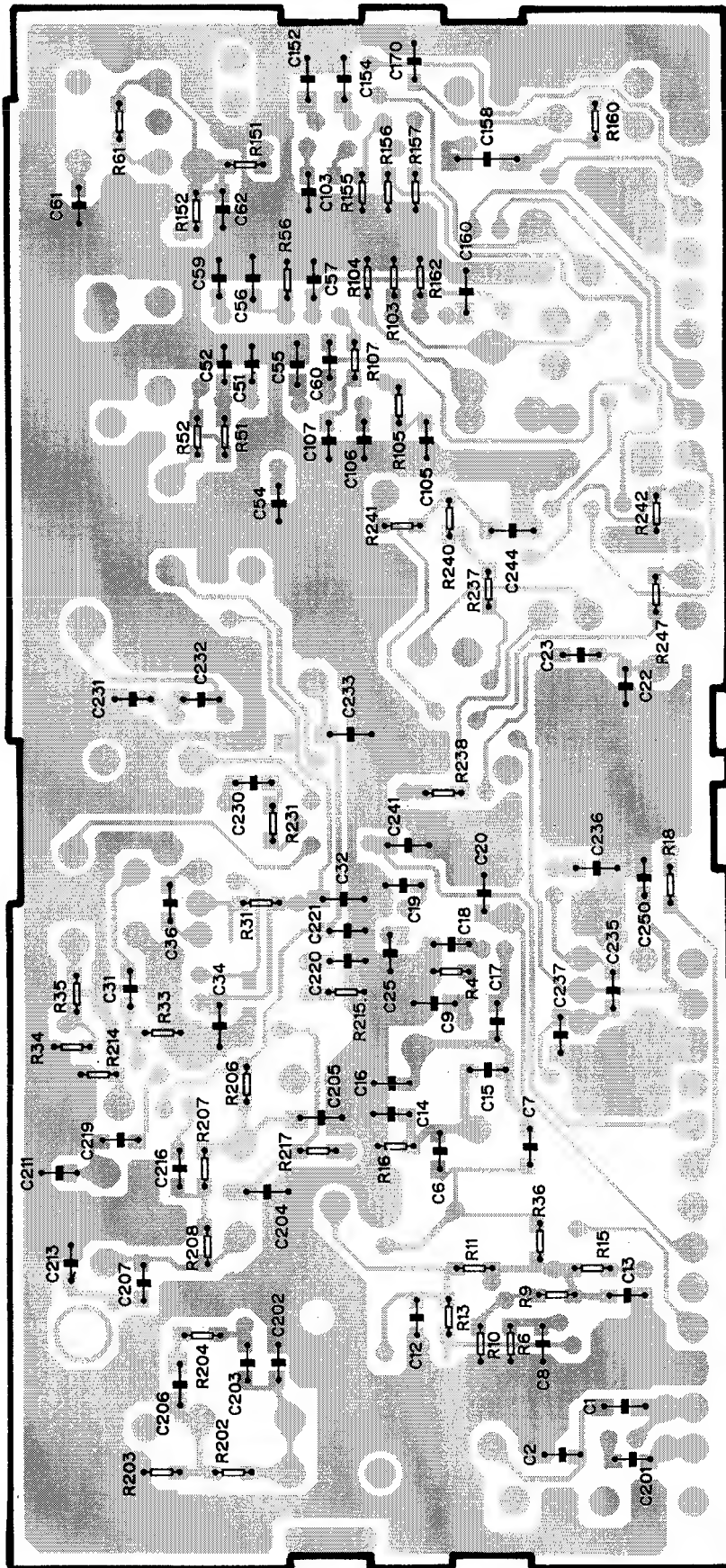# DEH-68,635,58,535,53
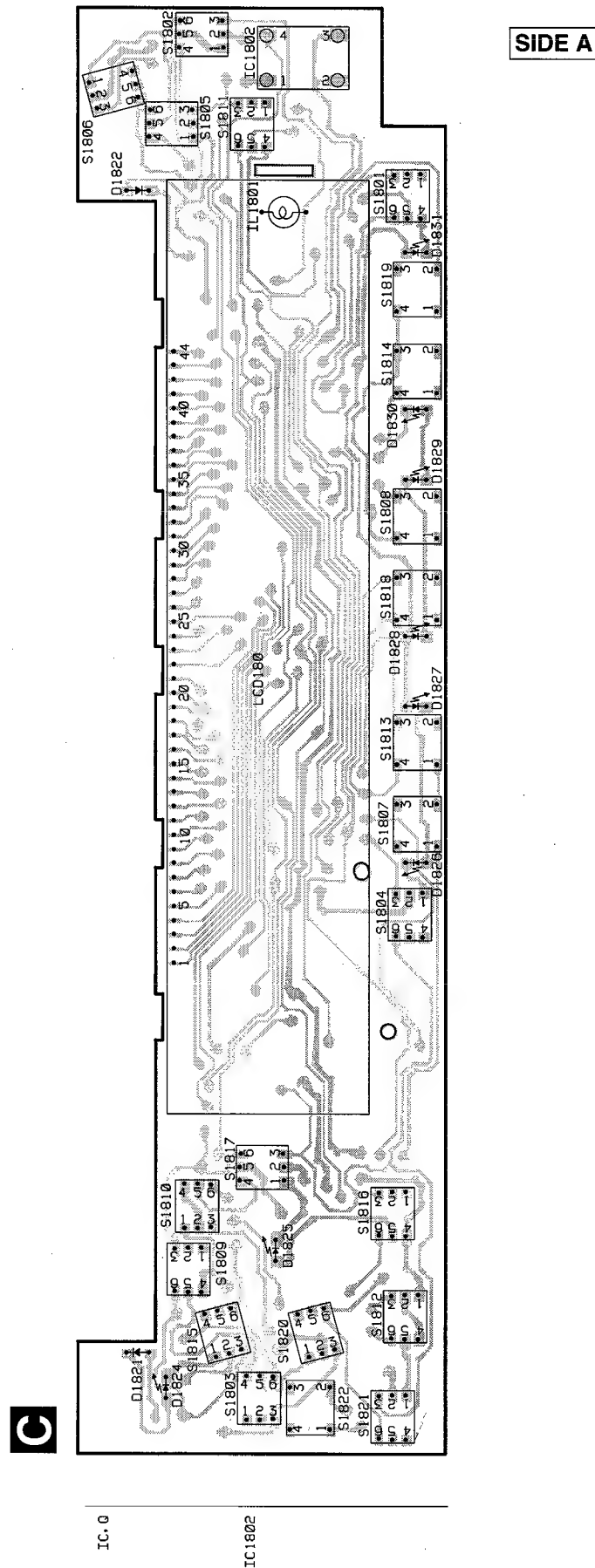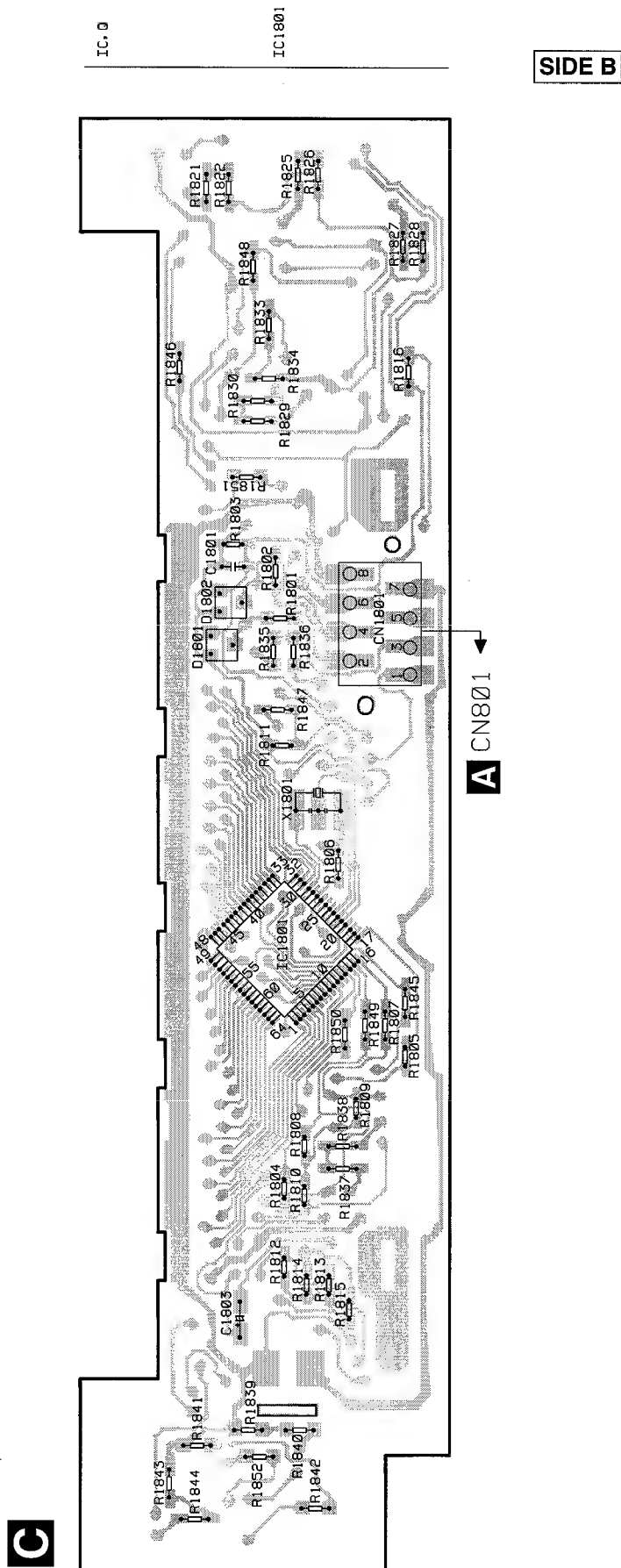
4.4 FM/AM TUNER UNIT

Fig. 23

SIDE B

Fig. 24

B

5. ELECTRICAL PARTS LIST

(1)PARTS LIST

NOTE:

● Parts whose parts numbers are omitted are subject to being not supplied.

● The part numbers shown below indicate chip components.

  Chip Resistor

   RS1/○S○○○J,RS1/○○S○○○J

  Chip Capacitor (except for CQS.....)

   CKS....., CCS....., CSZS.....

=====Circuit Symbol & No.===Part Name			Part No.	=====Circuit Symbol & No.===Part Name			Part No.
B	Unit Number	: CWE1417		R	13		RS1/16S563J
	Unit Name	: FM/AM Tuner Unit		R	15		RS1/16S271J
				R	16		RS1/16S104J
MISCELLANEOUS				R	17		RS1/16S332J
				R	18		RS1/16S332J
IC	1	IC	PA4023B				
IC	2	IC	PA4024A	R	31		RS1/16S470J
Q	1	Transistor	2SC2412KLN	R	32		RS1/16S822J
Q	2	Transistor	DTC124EU	R	33		RS1/16S822J
Q	3	FET	3SK263	R	34		RS1/16S331J
				R	35		RS1/16S331J
Q	31	Transistor	2SC2412KLN				
Q	201	FET	2SK932	R	51		RS1/16S271J
Q	202	Transistor	2SC2412KLN	R	52		RS1/16S560J
Q	203	Transistor	DTC124EU	R	55		RS1/16S102J
D	1	Diode	RD39JS	R	56		RS1/16S823J
				R	61		RS1/16S392J
D	2	Diode	RD39JS				
D	4	Diode	1SV250	R	62		RS1/16S273J
D	5	Diode	KV1410-F1	R	101		RS1/16S272J
D	6	Diode	MA157	R	102		RS1/16S682J
D	7	Diode	KV1410-F1	R	103		RS1/16S333J
				R	104		RS1/16S334J
D	8	Diode	KV1410-F1				
D	201	Diode	MA157	R	105		RS1/16S683J
D	202	Diode	MA157	R	107		RS1/16S222J
D	231	Diode	SVC253	R	151		RS1/16S222J
L	2	Coil	CTC1108	R	152		RS1/16S393J
				R	155		RS1/16S273J
L	3	Inductor	LCTB2R2K2125				
L	4	Coil	CTC1108	R	156		RS1/16S243J
L	5	Coil	CTC1107	R	157		RS1/16S203J
L	51	Ferri-Inductor	LAU150K	R	160		RS1/16S222J
L	201	Ferri-Inductor	LAU4R7K	R	161		RS1/16S563J
				R	162		RS1/16S105J
L	202	Ferri-Inductor	LAU330K				
L	203	Inductor	CTF1287	R	163		RS1/16S223J
L	208	Inductor	LAU121K	R	202		RS1/16S223J
L	231	Inductor	LCTA3R3J3225	R	203		RS1/16S225J
T	31	Coil	CTE1116	R	204		RS1/16S103J
				R	206		RS1/16S220J
T	51	Coil	CTC1136				
CF	51	Ceramic Filter	CTF1290	R	207		RS1/16S101J
CF	52	Ceramic Filter	CTF1290	R	208		RS1/16S102J
CF	53	Ceramic Filter	CTF1290	R	209		RS1/16S471J
CF	232	Ceramic Filter	CTF1348	R	214		RS1/16S822J
				R	215		RS1/16S822J
X	151	Resonator 920.5kHz	CSS1365				
X	231	Crystal Resonator 10.26MHz	CSS1111	R	217		RS1/16S102J
VR	154	Semi-fixed 150kΩ(B)	CCP1213	R	231		RS1/16S272J
				R	232		RS1/16S473J
RESISTORS				R	237		RS1/16S103J
				R	238		RS1/16S104J
R	1		RS1/16S225J				
R	2		RS1/16S225J	R	239		RS1/16S104J
R	4		RS1/16S154J	R	240		RS1/16S332J
R	5		RS1/16S391J	R	241		RS1/16S202J
R	6		RS1/16S223J	R	243		RS1/16S183J
				R	244		RS1/16S392J
R	7		RS1/16S123J				
R	8		RS1/16S332J	R	247		RS1/16S123J
R	9		RS1/16S473J				
R	10		RS1/16S223J				
R	11		RS1/16S124J				

=====Circuit Symbol & No.===Part Name	Part No.
CAPACITORS	
C 1	CCSQCH6R0D50
C 2	CCSRCK2R0C50
C 4	CCSRCH820J50
C 6	CCSRCH820J50
C 8	CKSRYB103K25
C 9	CKSQYB104K16
C 10	CCSRCKR50C50
C 11	CEJA1R0M50
C 12	CKSRYB222K50
C 13	CKSRYB222K50
C 14	CCSRCH220J50
C 15	CCSRCH6R0D50
C 16	CCSRCH8R0D50
C 17	CKSRYB222K50
C 18	CKSRYB103K25
C 19	CKSRYB222K50
C 20	CKSRYB222K50
C 21	CEJA100M16
C 22	CCSRTH9R0D50
C 23	CCSRTH120J50
C 24	CCSRCH471J50
C 25	CKSRYB103K25
C 26	CCSRCH101J50
C 31	CKSRYB103K25
C 32	CKSQYB472K50
C 33	CCSRCH5R0C50
C 34	CKSQYB104K16
C 36	CCSRRH201J50
C 51	CKSRYB223K25
C 52	CKSRYB103K25
C 54	CCSRCH470J50
C 55	CKSQYB223K25
C 56	CKSQYB104K16
C 57	CKSRYB472K50
C 58	CEJA330M10
C 59	CKSRYB103K25
C 60	CKSRYB102K50
C 61	CCSRCH270J50
C 62	CKSRYB103K25
C 63	CEJAR22M50
C 101	CEJANP100M10
C 102	CKSRYB182K50
C 103	CKSRYB682K25
C 104	CEJA2R2M50
C 105	CKSRYB103K25
C 106	CCSRCH151J50
C 107	CKSRYB103K25
C 151	CKSRYB472K50
C 152	CKSQYB104K16
C 153	CEJA3R3M50
C 154	CKSQYB104K16
C 157	CEJA3R3M50
C 158	CKSYB474K16
C 159	CEJA220M6R3
C 160	CKSQYB104K16
C 161	CKSQYB104K16
C 162	CEJA3R3M50
C 163	CKSRYB102K50
C 170	CCSRCH100D50
C 201	CCSRCH471J50
C 202	CCSRCH100D50
C 203	CKSRYB332K50
C 204	CKSQYB473K16
C 205	CKSQYB473K16
C 206	CKSQYB104K16

=====Circuit Symbol & No.===Part Name	Part No.
C 207	CCSRCH560J50
C 209	CKSQYB104K16
C 211	CCSRCH101J50
C 212	CEJA470M6R3
C 213	CKSRYB103K25
C 216	CCSRCH101J50
C 217	CEJA1R5M50
C 219	CCSRCH471J50
C 220	CKSRYB103K25
C 230	CKSRYB103K25
C 231	CCSRCH330J50
C 232	CCSRCH150J50
C 233	CKSQYB104K16
C 234	CEJA330M10
C 235	CKSRYB332K50
C 236	CKSQYB473K16
C 237	CCSRCH120J50
C 239	CKSRYB472K50
C 240	CEJAR47M50
C 241	CKSQYB104K16
C 242	CEJAR47M50
C 243	CEJAR33M50
C 244	CKSQYB473K16
C 245	CKSRYB333K16
C 246	CKSQYB473K16
C 250	CCSRCH471J50

E Unit Number : CWX1889
Unit Name : Control Unit

=====Circuit Symbol & No.===Part Name	Part No.
MISCELLANEOUS		
IC 101	IC	UPC2572GS
IC 201	IC	UPD63702GF
IC 301	IC	XLA6997FP
IC 302	IC	XLA6285FP
IC 601	IC	TA2063F
IC 701	IC	PQ05TZ51
Q 101	Transistor	2SD1664
Q 102	Transistor	UMD2N
Q 601	Transistor	2SD1781K
Q 602	Transistor	2SD1781K
Q 603	Transistor	2SB709A
D 601	Diode	MA151WA
D 701	Diode	1SR154-400
D 702	Diode	1SR154-400
D 801		CL200IRX
D 802		CL200IRX
X 201	Ceramic Resonator 16.93MHz	CSS1363
S 801	Switch(Home)	CSN1028
S 802	Switch(Clamp)	CSN1028
RESISTORS		
R 101		RS1/8S100J
R 102		RS1/8S120J
R 103		RS1/16S102J
R 104		RS1/16S822J
R 105		RS1/16S682J
R 106		RS1/16S183J
R 107		RS1/16S822J
R 108		RS1/16S333J
R 109		RS1/16S683J
R 110		RS1/16S134J
R 111		RS1/16S273J
R 112		RS1/16S222J
R 113		RS1/16S103J
R 114		RS1/16S103J
R 115		RS1/16S102J

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=====Circuit Symbol & No.===Part Name	Part No.
R 116	RS1/16S163J
R 117	RS1/16S163J
R 201	RS1/16S104J
R 202	RS1/16S473J
R 304	RS1/16S0R0J
R 501	RS1/16S0R0J
R 505	RS1/16S102J
R 507	RA4C102J
R 508	RA4C681J
R 510	RS1/10S0R0J
R 601	RS1/16S102J
R 602	RS1/16S102J
R 603	RS1/16S223J
R 604	RS1/16S223J
R 605	RS1/16S162J
R 606	RS1/16S162J
R 607	RS1/16S103J
R 801	RS1/8S751J
R 802	RS1/8S751J

CAPACITORS

C 101	CEV101M6R3
C 102	CKSQYB104K16
C 103	CEV470M6R3
C 104	CKSYB334K16
C 105	CCSRCH330J50
C 106	CKSRYB103K25
C 107	CEV4R7M35
C 108	CKSQYB273K50
C 109	CCSRCH101J50
C 110	CKSQYB104K16
C 111	CKSRYB332K50
C 112	CKSQYB473K16
C 113	CKSRYB103K25
C 114	CKSRYB391K50
C 115	CCSRCH121J50
C 116	CKSRYB682K25
C 117	CKSRYB333K16
C 118	CKSYB334K16
C 119	CKSYB334K16
C 120	CKSYB334K16
C 121	CKSYB334K16
C 122	CKSQYB104K16
C 123	CKSRYB472K50
C 124	CKSQYB104K16
C 125	CCSRCH6R0D50
C 126	CKSRYB153K25
C 127	CCSRCH102J25
C 201	CKSYB334K16
C 202	CKSQYB104K16
C 203	CKSQYB104K16
C 303	CEV470M16
C 304	CKSRYB103K25
C 305	CKSRYB103K25
C 306	CKSRYB103K25
C 502	CKSRYB471K50
C 601	CEV101M6R3
C 602	CKSQYB104K16
C 603	CEV4R7M35
C 604	CEV4R7M35
C 605	CKSRYB152K50
C 606	CKSRYB152K50
C 607	CEV220M6R3
C 701	22µF/6.3V	CCH1233
C 702	CKSYB334K16
C 703	CEV101M6R3

=====Circuit Symbol & No.===Part Name	Part No.
C 901	CCSRCH471J50
C 902	CCSRCH271J50
C 903	CCSRCH471J50
C 904	CCSRCH101J50

A Unit Number :
Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC 151	IC	SN761027DL
IC 201	IC	TDA7386
IC 271	IC	See Contrast table
IC 272	IC	See Contrast table
IC 273	IC	See Contrast table
IC 501	IC	PM2005B
IC 601	IC	See Contrast table
IC 701	IC	See Contrast table
IC 751	IC	See Contrast table
IC 851	IC	See Contrast table
IC 941	IC	S-80734ANDYI
Q 201	Transistor	DTC144EK
Q 251	Transistor	See Contrast table
Q 252	Transistor	See Contrast table
Q 253	Transistor	IMD2A
Q 254	Transistor	See Contrast table
Q 255	Transistor	IMH3A
Q 301	Transistor	See Contrast table
Q 302	Transistor	See Contrast table
Q 501	Transistor	2SC2712
Q 502	Transistor	DTC124EK
Q 601	Transistor	See Contrast table
Q 801	Transistor	2SA1162
Q 802	Transistor	2SD1760F5
Q 803	Transistor	DTC114EK
Q 804	Transistor	DTA143EK
Q 805	Transistor	DTC114EK
Q 806	Transistor	2SC2712
Q 807	Transistor	2SB1238
Q 808	Transistor	DTC143EK
Q 809	Transistor	2SD1864
Q 851	Transistor	See Contrast table
Q 852	Transistor	See Contrast table
Q 853	Transistor	See Contrast table
Q 854	Transistor	See Contrast table
Q 911	Transistor	2SD1760F5
Q 921	Transistor	IMX1
Q 922	Transistor	DTC114EK
Q 923	Transistor	2SC2712
Q 931	Transistor	See Contrast table
Q 932	Transistor	See Contrast table
Q 941	Transistor	See Contrast table
Q 951	Transistor	2SD2396
Q 952	Transistor	2SB1243
Q 953	Transistor	DTC124EK
Q 954	Transistor	2SA1674
Q 955	Transistor	2SA1674
Q 956	Transistor	IMH1A
Q 957	Transistor	2SC2712
Q 971	Transistor	2SD2396
Q 972	Transistor	IMD2A
D 201	Diode	DAN202K
D 251	Diode	1SS133
D 252	Diode	See Contrast table
D 501	Diode	DAN202K
D 801	Diode	DA204K
D 802	Diode	DA204K
D 803	Diode	DA204K
D 804	Diode	MA3062(M)
D 805	Diode	MA3075(L)

=====Circuit Symbol & No.===Part Name			Part No.	=====Circuit Symbol & No.===Part Name			Part No.
D	806	Diode	MA3039(H)	R	269		See Contrast table
D	851	LED	See Contrast table	R	271		See Contrast table
D	858	Diode	See Contrast table	R	272		See Contrast table
D	860	Diode	See Contrast table	R	273		See Contrast table
D	901	Diode	ERA15-02VH	R	274		See Contrast table
D	902	Diode	ERA15-02VH	R	275		See Contrast table
D	911	Diode	ERA15-02VH	R	277		See Contrast table
D	912	Diode	HZS6L(B1)	R	278		See Contrast table
D	921	Diode	HZS7L(C3)	R	279		See Contrast table
D	922	Diode	ERA15-02VH	R	280		See Contrast table
D	923	Diode	HZS7L(A1)	R	281		See Contrast table
D	931	Diode	ERA15-02VH	R	282		See Contrast table
D	932	Diode	ERA15-02VH	R	283		See Contrast table
D	933	Diode	See Contrast table	R	284		See Contrast table
D	934	Diode	See Contrast table	R	285		See Contrast table
D	941	Diode	1SS133	R	291		See Contrast table
D	951	Diode	HZS9L(B3)	R	301		RS1/10S151J
D	952	Diode	HZS9L(A2)	R	302		RS1/10S151J
D	953	Diode	1SS133	R	303		See Contrast table
D	971	Diode	HZS9L(B1)	R	304		See Contrast table
L	501	Ferri-Inductor	LAU2R2K	R	351		RS1/10S0R0J
L	502	Ferri-Inductor	LAU2R2K	R	352		RS1/10S0R0J
L	503	Ferri-Inductor	LAU2R2K	R	353		RS1/10S0R0J
L	601	Ferri-Inductor	LAU2R2K	R	354		RS1/10S0R0J
L	602	Inductor	LAU100K	R	501		RS1/10S0R0J
L	701	Inductor	See Contrast table	R	502		RS1/10S222J
L	751	Ferri-Inductor	See Contrast table	R	503		RS1/10S222J
L	801	Ferri-Inductor	LAU2R2K	R	504		RS1/10S102J
L	802	Transformer	MTX9006	R	505		RS1/10S222J
TH	601	Thermistor	CCX1031	R	506		RS1/10S681J
X	501	Crystal Resonator 7.200MHz	CSS1379	R	507		RS1/10S472J
X	601	Ceramic Resonator 4.194MHz	CSS1047	R	508		RS1/10S682J
X	701	Radiator 4.330MHz	See Contrast table	R	509		RS1/10S682J
S	941	Switch	See Contrast table	R	510		RS1/10S561J
		FM/AM Tuner Unit	CWE1417	R	511		RS1/10S103J
BZ	601	Buzzer	See Contrast table	R	512		RS1/10S472J
				R	513		RS1/10S222J
RESISTORS				R	514		RS1/10S392J
				R	515		RS1/10S392J
R	133		RS1/10S162J	R	516		RS1/10S152J
R	134		RS1/10S162J				
R	141		RS1/10S0R0J	R	517		RS1/10S102J
R	142		RS1/10S0R0J	R	518		RS1/10S272J
R	151		RS1/10S272J	R	519		RS1/10S102J
				R	520		RS1/10S103J
R	152		RS1/10S272J	R	525		RS1/10S473J
R	153		RS1/10S151J				
R	154		RS1/10S151J	R	526		RS1/10S224J
R	201		RS1/10S103J	R	527		RS1/10S223J
R	202		RS1/10S331J	R	528		RS1/10S562J
				R	529		RS1/10S472J
R	204		RS1/10S103J	R	530		RS1/10S472J
R	205		RS1/10S103J				
R	251		See Contrast table	R	531		RS1/10S472J
R	252		See Contrast table	R	532		RS1/10S473J
R	253		See Contrast table	R	533		RS1/10S102J
				R	534		RS1/10S0R0J
R	254		See Contrast table	R	540		RS1/10S0R0J
R	255		See Contrast table				
R	256		See Contrast table	R	601		RS1/10S222J
R	257		See Contrast table	R	602		See Contrast table
R	258		See Contrast table	R	603		See Contrast table
				R	604		See Contrast table
R	259		See Contrast table	R	605		RS1/10S473J
R	260		See Contrast table				
R	261		See Contrast table	R	606		RS1/10S473J
R	262		See Contrast table	R	607		RS1/10S473J
R	263		See Contrast table	R	608		See Contrast table
				R	609		See Contrast table
R	264		See Contrast table	R	610		RS1/10S473J
R	265		See Contrast table				
R	266		RS1/10S223J				
R	267		See Contrast table				
R	268		See Contrast table				

DEH-68,635,58,535,53

=====Circuit Symbol & No.===Part Name		Part No.	=====Circuit Symbol & No.===Part Name		Part No.
R	611	RS1/10S222J	R	858	See Contrast table
R	612	RS1/10S681J	R	860	See Contrast table
R	613	RS1/10S681J	R	861	See Contrast table
R	614	RS1/10S681J	R	862	See Contrast table
R	615	RS1/10S681J	R	863	See Contrast table
R	616	See Contrast table	R	864	See Contrast table
R	617	See Contrast table	R	865	See Contrast table
R	618	See Contrast table	R	866	See Contrast table
R	619	RS1/10S393J	R	867	See Contrast table
R	620	RS1/10S473J	R	868	See Contrast table
R	621	RS1/10S473J	R	869	See Contrast table
R	622	RS1/10S222J	R	911	RS1/10S392J
R	623	RS1/10S473J	R	912	RS1/10S101J
R	624	See Contrast table	R	921	RS1/10S103J
R	625	See Contrast table	R	922	RS1/10S473J
R	626	RS1/10S473J	R	923	RS1/10S103J
R	627	RS1/10S473J	R	924	RS1/10S103J
R	628	RS1/10S393J	R	925	RS1/10S473J
R	629	RS1/10S473J	R	926	RS1/10S472J
R	630	See Contrast table	R	927	RS1/8S224J
R	631	See Contrast table	R	933	See Contrast table
R	632	RN1/10SE2202D	R	934	See Contrast table
R	634	RS1/10S102J	R	941	RS1/10S102J
R	635	RS1/10S0R0J	R	942	RS1/10S822J
R	651	RS1/10S681J	R	943	See Contrast table
R	652	RS1/10S681J	R	946	See Contrast table
R	653	RS1/10S681J	R	951	RD1/4PU221J
R	654	RS1/10S681J	R	952	RD1/4PU301J
R	701	See Contrast table	R	953	RS1/10S1R0J
R	702	See Contrast table	R	954	RD1/4PU331J
R	703	See Contrast table	R	955	RD1/4PU331J
R	704	See Contrast table	R	956	RS1/10S472J
R	705	See Contrast table	R	957	RD1/4PU102J
R	706	See Contrast table	R	958	RS1/10S472J
R	707	See Contrast table	R	959	RD1/4PU102J
R	708	See Contrast table	R	960	RS1/10S472J
R	710	See Contrast table	R	961	RS1/10S103J
R	713	See Contrast table	R	962	RS1/10S473J
R	714	See Contrast table	R	963	RS1/10S473J
R	715	See Contrast table	R	965	RS1/10S0R0J
R	716	See Contrast table	R	971	RD1/4PU221J
R	717	See Contrast table	R	972	RS1/10S221J
R	728	See Contrast table	R	973	RS1/10S472J
R	751	See Contrast table	R	974	RS1/10S222J
R	802	RS1/8S222J		CAPACITORS	
R	804	RS1/8S222J			
R	806	RS1/8S222J	C	133	CKSQYB473K50
R	807	RS1/10S102J	C	134	CKSQYB473K50
R	808	RS1/10S223J	C	135	CEJA4R7M35
R	809	RS1/10S682J	C	136	CEJA4R7M35
R	810	RS2PMF100J	C	137	CEJA2R2M50
R	811	RD1/4PU471J	C	138	CEJA2R2M50
R	812	RS1/10S103J	C	151	CKSQYB473K50
R	813	RS1/10S224J	C	152	CEJA470M10
R	814	RS1/10S222J	C	153	CEJANP100M16
R	815	RD1/4PU102J	C	154	CEJANP100M16
R	816	RS1/10S132J	C	155	CKSQYB822K50
R	817	RS1/10S822J	C	156	CKSQYB822K50
R	818	RS1/10S104J	C	157	CEJA1R0M50
R	819	RS2PMF220J	C	158	CEJA1R0M50
R	851	See Contrast table	C	159	CKSQYB183K50
R	852	See Contrast table	C	160	CKSQYB183K50
R	853	See Contrast table	C	161	CKSQYB102K50
R	854	See Contrast table	C	162	CKSQYB102K50
R	856	See Contrast table	C	163	CEJANP2R2M35
			C	164	CEJANP2R2M35

=====Circuit Symbol & No.===Part Name		Part No.
C	165	CKSQYB333K50
C	166	CKSQYB333K50
C	167	CEJA220M16
C	168	CEJA2R2M50
C	169	CKSQYB104K50
C	201	CKSQYB224K16
C	202	CKSQYB224K16
C	203	CKSQYB224K16
C	204	CKSQYB224K16
C	205	CEJA1R0M50
C	206 3300μF/16V	CCH1150
C	207	CKSQYB473K50
C	208	CEJA100M16
C	209	CEJA1R0M50
C	210	CEJA330M16
C	251	See Contrast table
C	252	See Contrast table
C	253	CEJA4R7M35
C	254	CEJA4R7M35
C	255	See Contrast table
C	256	See Contrast table
C	257	See Contrast table
C	258	See Contrast table
C	271	See Contrast table
C	272	See Contrast table
C	273	See Contrast table
C	274	See Contrast table
C	275	See Contrast table
C	276	See Contrast table
C	277	See Contrast table
C	278	See Contrast table
C	279	See Contrast table
C	280	See Contrast table
C	281	See Contrast table
C	282	See Contrast table
C	284	See Contrast table
C	291	See Contrast table
C	301	See Contrast table
C	302	See Contrast table
C	501	CCSQCH150K50
C	502	CCSQCH150K50
C	503	CKSQYB103K50
C	504	CKSQYB103K50
C	505	CCSQCH101K50
C	506	CKSQYB103K50
C	507	CKSQYB103K50
C	508	CKSQYB102K50
C	509	CEJA220M10
C	510	CKSQYB223K50
C	513	CKSQYB103K50
C	514	CCSQCH101K50
C	515	CEJA220M6R3
C	516	CKSQYB103K50
C	517	CEJA220M6R3
C	518	CKSQYB103K50
C	519	CEJA220M10
C	520	CKSQYB103K50
C	521 4.7μF/16V	CCH1250
C	522	CKSQYB103K50
C	523	CKLSR473K16
C	524	CKSQYB332K50
C	525 4.7μF/16V	CCH1250
C	526	CKSQYB103K50
C	528	CKSQYB103K50
C	529	CKSQYB103K50

=====Circuit Symbol & No.===Part Name		Part No.
C	531	CKSQYB223K50
C	532	CKSQYB223K50
C	534	CCSQCH101K50
C	536	CKSQYB103K50
C	538	CKSQYB103K50
C	601	CEJA4R7M35
C	602	CKSQYB103K50
C	603	CKSQYB473K50
C	605	CKSQYB473K50
C	651	CCSQCH821J50
C	652	CCSQCH821J50
C	701	See Contrast table
C	705	See Contrast table
C	709	See Contrast table
C	710	See Contrast table
C	751	See Contrast table
C	802	CKSQYB104K25
C	803	CEJA100M16
C	804	CKSQYB103K50
C	805	CEJA100M16
C	806	CKSQYB103K50
C	807	CKSQYB333K50
C	808	CKSQYB333K50
C	852	See Contrast table
C	853	See Contrast table
C	855	See Contrast table
C	856	See Contrast table
C	857	See Contrast table
C	858	See Contrast table
C	911	CKSQYB103K50
C	913	CKSQYB472K50
C	914 1000μF/16V	CCH1149
C	915	CEJA470M10
C	921	CKSYB105K16
C	922	CKSYB102K50
C	931	See Contrast table
C	932	CKSYB103K50
C	941	CEJA2R2M50
C	951	CKSQYB103K50
C	952	CEJA101M16
C	954	CEAS331M10
C	971	CKSQYB473K50
C	972	CKSQYB102K50
C	973	CEAL101M10

CONTRAST TABLE of TUNER AMP UNIT DEH-68/UC, DEH-635/UC, DEH-58/UC, DEH-535/UC and DEH-53/UC have the same construction except for the following:

Symbol & Description	Part No.	
	DEH-68/UC	DEH-635/UC
IC271 IC	M5282FP	Not used
IC272 IC	MC14052BF	Not used
IC273 IC	NJM2068MD	Not used
IC851 IC	TPD1018F	Not used
Q252 Transistor	IMH3A	Not used
Q254 Transistor	IMD2A	Not used
Q853 Transistor	DTC123EK	Not used
Q854 Transistor	DTC123EK	Not used
D252 Diode	1SS133	Not used
D858, 860 Diode	ERA15-02VH	Not used
R253, 254	RS1/10S681J	Not used
R257, 258	RS1/10S223J	Not used
R259	Not used	RS1/10S681J
R260	RS1/10S821J	RS1/10S681J
R263, 267	RS1/10S0R0J	Not used

DEH-68,635,58,535,53

Symbol & Description	Part No. DEH-68/UC	Part No. DEH-635/UC
R264	RS1/10S0R0J	Not used
R265	Not used	RS1/10S223J
R268, 269	Not used	RS1/10S0R0J
R271, 272	RS1/10S183J	Not used
R273, 277, 278	RS1/10S103J	Not used
R274	RS1/10S243J	Not used
R275	RS1/10S683J	Not used
R279, 281, 283	RS1/10S104J	Not used
R280, 282, 284	RS1/10S104J	Not used
R285	RS1/10S105J	Not used
R291, 867	RS1/10S473J	Not used
R624	RS1/10S104J	RS1/10S473J
R853, 860	RS1/10S103J	Not used
R856	RS1/10S163J	Not used
R858	RS1/10S163J	Not used
R863, 864	RD1/4PU102J	Not used
R868	RS1/10S473J	Not used
C257, 258	CCSQCH221J50	Not used
C271	CEJA220M10	Not used
C272	CEJA101M10	Not used
C273	CKSQYB472K50	Not used
C274, 284	CEJA4R7M35	Not used
C275	CEJANP220M10	Not used
C276	CKSQYB222K50	Not used
C277	CKSQYB183K50	Not used
C278, 852	CKSQYB473K50	Not used
C279	CKSQYB273K50	Not used
C280, 853	CKSYB103K50	Not used
C281	CKSQYB223K50	Not used
C282	CKSQYB153K50	Not used
C291, 855	CKSQYB103K50	Not used
C856	CKSQYB103K50	Not used

Symbol & Description	Part No. DEH-68/UC	Part No. DEH-58/UC
IC601 IC	PD4808B	PD4721B
IC701 IC	PD6194A	Not used
IC751 IC	PD8027A	Not used
Q941 Transistor	DTA144TK	Not used
L701 Inductor	LAU100K	Not used
L751 Ferri-Inductor	LAU2R2K	Not used
X701 Radiator	CSS1338	Not used
S941 Switch	CSG1046	Not used
R602, 603, 604, 618	RS1/10S473J	Not used
R608, 609, 713, 714	RS1/10S473J	Not used
R616	Not used	RS1/10S473J
R617	RS1/10S0R0J	Not used
R701, 702	RS1/10S681J	Not used
R703	RS1/10S0R0J	Not used
R704	RS1/10S105J	Not used
R705	RS1/10S681J	Not used
R706	RS1/10S681J	Not used
R707, 708	RS1/10S681J	Not used
R710	RS1/10S473J	Not used
R715, 716, 717, 946	RS1/10S473J	Not used
R728	RA3C473J	Not used
R751	RS1/10S0R0J	Not used
R943	RS1/8S471J	Not used
C701	CKSYB224K16	Not used
C705, 709	CKSQYB103K50	Not used
C710	CASA1R0M16	Not used
C751	CEJA100M16	Not used

Symbol & Description	Part No. DEH-68/UC	Part No. DEH-535/UC
IC271 IC	M5282FP	Not used
IC272 IC	MC14052BF	Not used
IC273 IC	NJM2068MD	Not used
IC601 IC	PD4808B	PD4721B
IC701 IC	PD6194A	Not used
IC751 IC	PD8027A	Not used
IC851 IC	TPD1018F	Not used
Q252 Transistor	IMH3A	Not used
Q254 Transistor	IMD2A	Not used
Q601 Transistor	DTC114EK	Not used
Q851 Transistor	IMD2A	Not used
Q852 Transistor	DTC143EK	Not used
Q853 Transistor	DTC123EK	Not used
Q854 Transistor	DTC123EK	Not used
Q931 Transistor	2SB1243	Not used
Q932 Transistor	DTC114EK	Not used
Q941 Transistor	DTA144TK	Not used
D252 Diode	1SS133	Not used
D851 LED	BR4361F	Not used
D858, 860, 933, 934 Diode	ERA15-02VH	Not used
L701 Inductor	LAU100K	Not used
L751 Ferri-Inductor	LAU2R2K	Not used
X701 Radiator	CSS1338	Not used
S941 Switch	CSG1046	Not used
BZ601 Buzzer	CPV1011	Not used
R253, 254, 705	RS1/10S681J	Not used
R257, 258	RS1/10S223J	Not used
R259	Not used	RS1/10S681J
R260	RS1/10S821J	RS1/10S681J
R263, 267, 703	RS1/10S0R0J	Not used
R264, 617	RS1/10S0R0J	Not used
R265	Not used	RS1/10S223J
R268, 269	Not used	RS1/10S0R0J
R271, 272	RS1/10S183J	Not used
R273, 277, 278, 852	RS1/10S103J	Not used
R274	RS1/10S243J	Not used
R275	RS1/10S683J	Not used
R279, 281, 283	RS1/10S104J	Not used
R280, 282, 284	RS1/10S104J	Not used
R285	RS1/10S105J	Not used
R291, 602, 603, 604	RS1/10S473J	Not used
R608, 609, 713, 714	RS1/10S473J	Not used
R616	Not used	RS1/10S473J
R618, 710, 867, 869	RS1/10S473J	Not used
R624	RS1/10S104J	RS1/10S473J
R630	RS1/10S202J	Not used
R631, 866	RS1/10S102J	Not used
R701, 702	RS1/10S681J	Not used
R704	RS1/10S105J	Not used
R706	RS1/10S681J	Not used
R707, 708	RS1/10S681J	Not used
R715, 716, 717, 868	RS1/10S473J	Not used
R728	RA3C473J	Not used
R751	RS1/10S0R0J	Not used
R851	RS1/8S331J	Not used
R853, 860, 865	RS1/10S103J	Not used
R854	RS1/10S303J	Not used
R856	RS1/10S163J	Not used
R858	RS1/10S163J	Not used
R861	RS1/10S103J	Not used
R862, 863, 864	RD1/4PU102J	Not used
R933	RS1/10S472J	Not used
R934	RD1/4PU272J	Not used
R943	RS1/8S471J	Not used
R946	RS1/10S473J	Not used
C257, 258	CCSQCH221J50	Not used
C271	CEJA220M10	Not used

Symbol & Description	Part No. DEH-68/UC	Part No. DEH-535/UC
C272	CEJA101M10	Not used
C273	CKSQYB472K50	Not used
C274, 284	CEJA4R7M35	Not used
C275	CEJANP220M10	Not used
C276	CKSQYB222K50	Not used
C277	CKSQYB183K50	Not used
C278, 852, 858	CKSQYB473K50	Not used
C279	CKSQYB273K50	Not used
C280, 853	CKSYB103K50	Not used
C281	CKSQYB223K50	Not used
C282	CKSQYB153K50	Not used
C291, 705, 709, 855	CKSQYB103K50	Not used
C701	CKSYB224K16	Not used
C710	CASA1R0M16	Not used
C751	CEJA100M16	Not used
C856	CKSQYB103K50	Not used
C857	CKSQYB103K50	Not used
C931	CKSYB103K50	Not used

Symbol & Description	Part No. DEH-68/UC	Part No. DEH-53/UC
IC271 IC	M5282FP	Not used
IC272 IC	MC14052BF	Not used
IC273 IC	NJM2068MD	Not used
IC601 IC	PD4808B	PD4721B
IC701 IC	PD6194A	Not used
IC751 IC	PD8027A	Not used
IC851 IC	TPD1018F	Not used
Q251, 252, 302 Transistor	IMH3A	Not used
Q254 Transistor	IMD2A	Not used
Q301 Transistor	DTA124EK	Not used
Q601 Transistor	DTC114EK	Not used
Q851 Transistor	IMD2A	Not used
Q852 Transistor	DTC143EK	Not used
Q853 Transistor	DTC123EK	Not used
Q854 Transistor	DTC123EK	Not used
Q931 Transistor	2SB1243	Not used
Q932 Transistor	DTC114EK	Not used
Q941 Transistor	DTA144TK	Not used
D252 Diode	1SS133	Not used
D851 LED	BR4361F	Not used
D858, 860, 933, 934 Diode	ERA15-02VH	Not used
L701 Inductor	LAU100K	Not used
L751 Ferri-Inductor	LAU2R2K	Not used
X701 Radiator	CSS1338	Not used
S941 Switch	CSG1046	Not used
BZ601 Buzzer	CPV1011	Not used
R251, 252	RS1/10S821J	Not used
R253, 254, 705	RS1/10S681J	Not used
R255, 256, 257, 258	RS1/10S223J	Not used
R259	Not used	RS1/10S681J
R260	RS1/10S821J	RS1/10S681J
R261, 262, 264, 617	RS1/10S0R0J	Not used
R263, 267, 703	RS1/10S0R0J	Not used
R265	Not used	RS1/10S223J
R268, 269	Not used	RS1/10S0R0J
R271, 272	RS1/10S183J	Not used
R273, 277, 278, 852	RS1/10S103J	Not used
R274	RS1/10S243J	Not used
R275	RS1/10S683J	Not used
R279, 281, 283, 303	RS1/10S104J	Not used
R280, 282, 284	RS1/10S104J	Not used

Symbol & Description	Part No. DEH-68/UC	Part No. DEH-53/UC
R285	RS1/10S105J	Not used
R291, 602, 603, 604	RS1/10S473J	Not used
R304	RS1/10S104J	Not used
R608, 609, 713, 714	RS1/10S473J	Not used
R616	Not used	RS1/10S473J
R618, 710, 867, 869	RS1/10S473J	Not used
R624	RS1/10S104J	RS1/10S333J
R625	RS1/10S333J	RS1/10S473J
R630	RS1/10S202J	Not used
R631, 866	RS1/10S102J	Not used
R701, 702	RS1/10S681J	Not used
R704	RS1/10S105J	Not used
R706	RS1/10S681J	Not used
R707, 708	RS1/10S681J	Not used
R715, 716, 717, 868	RS1/10S473J	Not used
R728	RA3C473J	Not used
R751	RS1/10S0R0J	Not used
R851	RS1/8S331J	Not used
R853, 860, 865	RS1/10S103J	Not used
R854	RS1/10S303J	Not used
R856	RS1/10S163J	Not used
R858	RS1/10S163J	Not used
R861	RS1/10S103J	Not used
R862, 863, 864	RD1/4PU102J	Not used
R933	RS1/10S472J	Not used
R934	RD1/4PU272J	Not used
R943	RS1/8S471J	Not used
R946	RS1/10S473J	Not used
C251, 252, 274, 284	CEJA4R7M35	Not used
C255, 256, 257, 258	CCSQCH221J50	Not used
C271	CEJA220M10	Not used
C272	CEJA101M10	Not used
C273	CKSQYB472K50	Not used
C275	CEJANP220M10	Not used
C276	CKSQYB222K50	Not used
C277	CKSQYB183K50	Not used
C278, 852, 858	CKSQYB473K50	Not used
C279	CKSQYB273K50	Not used
C280, 853	CKSYB103K50	Not used
C281	CKSQYB223K50	Not used
C282	CKSQYB153K50	Not used
C291, 705, 709, 855	CKSQYB103K50	Not used
C301, 302, 751	CEJA100M16	Not used
C701	CKSYB224K16	Not used
C710	CASA1R0M16	Not used
C856	CKSQYB103K50	Not used
C857	CKSQYB103K50	Not used
C931	CKSYB103K50	Not used

DEH-68,635,58,535,53

=====Circuit Symbol & No.===Part Name		Part No.

C Unit Number :
Unit Name : Keyboard Unit

MISCELLANEOUS

IC	1801	IC	PD6196A
IC	1802	HIC Module	RS-140
D	1801	Diode	DA204K
D	1802	Diode	DA204K
D	1821	LED	CL220PGC
D	1822	LED	CL220PGC
D	1824	LED	CL170PGCD
D	1825	LED	CL170PGCD
D	1826	LED	CL170PGCD
D	1827	LED	CL170PGCD
D	1828	LED	CL170PGCD
D	1829	LED	CL170PGCD
D	1830	LED	CL170PGCD
D	1831	LED	CL170PGCD
X	1801	Ceramic Resonator 4.97MHz	CSS1312
S	1801	Push Switch	CSG1085
S	1802	Push Switch	CSG1086
S	1803	Push Switch	CSG1085
S	1804	Push Switch	CSG1084
S	1805	Push Switch	CSG1086
S	1806	Push Switch	CSG1084
S	1807	Push Switch	CSG1061
S	1808	Push Switch	CSG1061
S	1809	Push Switch	CSG1085
S	1810	Push Switch	CSG1086
S	1811	Push Switch	CSG1085
S	1812	Push Switch	CSG1086
S	1813	Push Switch	CSG1061
S	1814	Push Switch	CSG1061
S	1815	Push Switch	CSG1084
S	1816	Push Switch	CSG1085
S	1817	Push Switch	CSG1086
S	1818	Push Switch	CSG1061
S	1819	Push Switch	CSG1061
S	1820	Push Switch	CSG1084
S	1821	Push Switch	CSG1084
IL	1801	EL	CEL1489
		LCD	CAW1393

RESISTORS

R	1801		RS1/8S222J
R	1802		RS1/8S222J
R	1803		RS1/10S472J
R	1804		RS1/10S121J
R	1805		RS1/10S2R2J
R	1806		RS1/8S102J
R	1807		RS1/8S102J
R	1812		See Contrast table
R	1813		See Contrast table
R	1814		See Contrast table
R	1815		See Contrast table
R	1816		RS1/8S0R0J
R	1821		RS1/8S151J
R	1822		RS1/8S101J
R	1825		RS1/8S151J
R	1826		RS1/8S101J
R	1827		RS1/8S101J
R	1828		RS1/8S101J
R	1829		RS1/8S151J
R	1830		RS1/8S101J

=====Circuit Symbol & No.===Part Name		Part No.

R	1833		RS1/8S151J
R	1834		RS1/8S101J
R	1835		RS1/8S101J
R	1836		RS1/8S101J
R	1837		RS1/8S101J
R	1838		RS1/8S101J
R	1839		RS1/8S101J
R	1840		RS1/8S101J
R	1841		RS1/8S101J
R	1842		RS1/8S101J
R	1843		RS1/8S101J
R	1844		RS1/8S101J
R	1845		RS1/8S102J
R	1846		RS1/8S102J
R	1847		RS1/8S102J
R	1848		RS1/8S102J
R	1849		RS1/8S102J
R	1850		RS1/8S102J
R	1851		RS1/8S102J
R	1852		RS1/8S102J

CAPACITORS

C	1801		CKSQYB104K50
C	1803		CEV100M16

CONTRAST TABLE of KEYBOARD UNIT

DEH-68/UC, DEH-635/UC, DEH-58/UC, DEH-535/UC and DEH-53/UC have the same construction except for the following:

Symbol & Description	Part No.	
	DEH-68/UC DEH-635/UC	DEH-58/UC
R1812	RS1/10S0R0J	Not used
R1813	Not used	RS1/10S0R0J
R1814	Not used	RS1/10S102J
R1815	RS1/10S102J	Not used

Symbol & Description	Part No.	
	DEH-68/UC DEH-635/UC	DEH-535/UC
R1812	RS1/10S0R0J	Not used
R1813	Not used	RS1/10S0R0J
R1814	Not used	RS1/10S102J
R1815	RS1/10S102J	Not used

Symbol & Description	Part No.	
	DEH-68/UC DEH-635/UC	DEH-53/UC
R1812	RS1/10S0R0J	Not used
R1813	Not used	RS1/10S0R0J
R1814	Not used	RS1/10S102J
R1815	RS1/10S102J	Not used

D Unit Number :
Unit Name : Detector PCB

Q	1	Photo-transistor	CPT-230S-X
Q	2	Photo-transistor	CPT-230S-X

Miscellaneous Parts List

		Pickup Unit(Service)	CXX1230
M	1	Motor Unit(Spindle)	CXA8912
M	2	CRG Motor Unit(Carriage)	CXA8986
M	3	Load Motor Unit(Loading)	CXA8702

6. ADJUSTMENT
6.1 TUNER ADJUSTMENT
● **Connection Diagram**
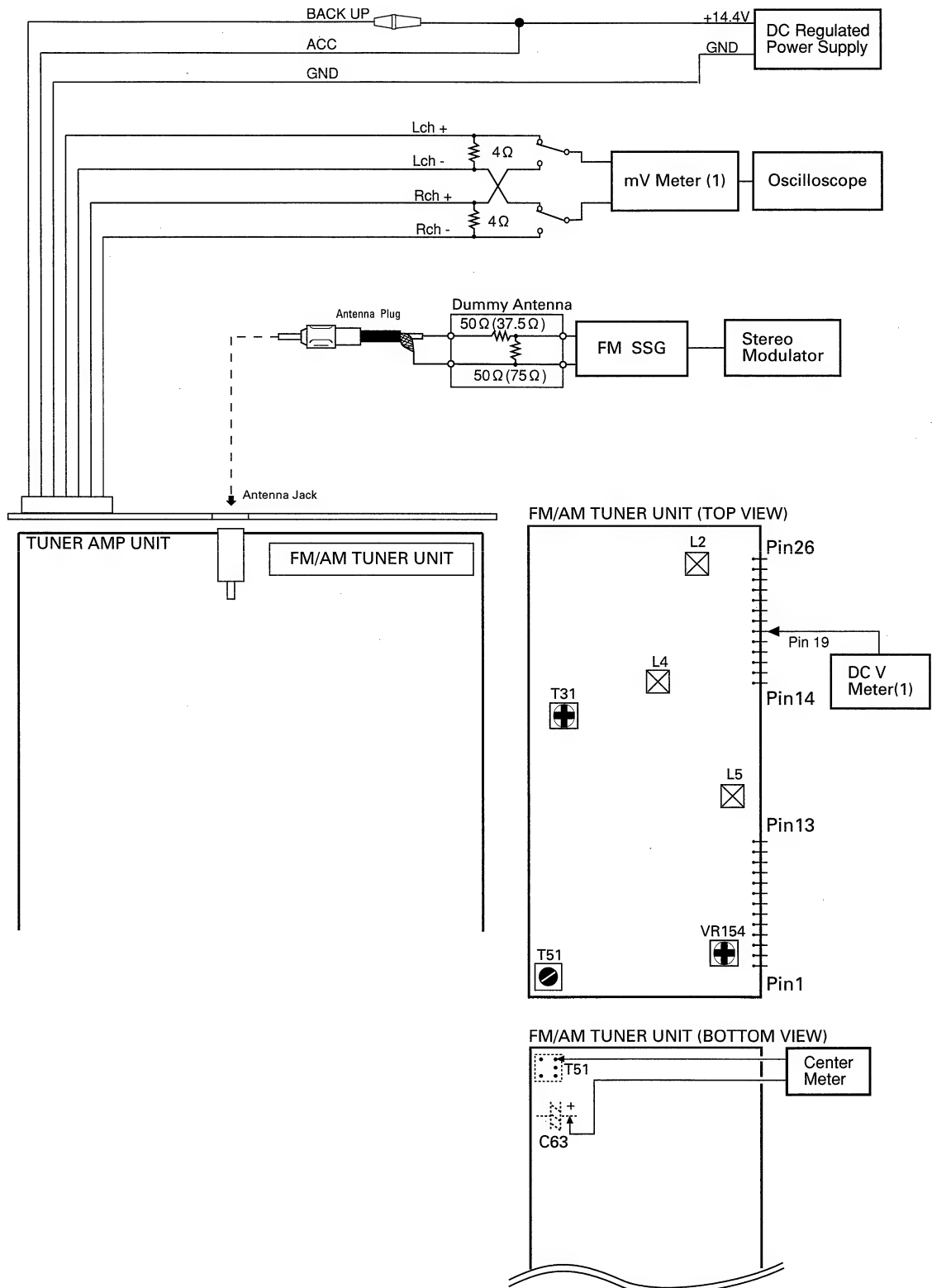
Fig. 25

DEH-68,635,58,535,53

FM ADJUSTMENT

Modulation   M:MONO MOD., 400Hz 30%(22.5kHz Dev.)

S:STEREO MOD., 1kHz, L or R=30%(20.25kHz+7.5kHz Dev.)

NOTE:Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

| | No. | FM SSG | | Displayed | Adjustment | Adjustment Method |
		Frequency(MHz)	Level(dBf)	Frequency(MHz)	Point	(Switch Position)
TUN Volt	1	•••••	•••••	108.0	L5	DC V Meter(1) : 6V
IF	1	98.1 M	60	98.1	T51	Center Meter : 0
ANT Coil	1	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	1	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
IFT	1	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	1	98.1 S	39	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

6.2 CHECKING THE GRATING

● **Checking the Grating After Changing the Service Pickup Unit**

·Note :
Unlike previous CD mechanism modules the grating angle of the Pickup unit cannot be adjusted after the Pickup unit is changed. The Pickup unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted Pickup unit for the CD mechanism module. Changing the Pickup unit is thus best considered as a last resort. However, if the Pickup unit must be changed, the grating should be checked using the procedure below.

·Purpose :
To check that the grating is within an acceptable range.

·Symptoms of Mal-adjustment :
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or track searching taking a long time, may appear.

·Method :

·Measuring Equipment	·Oscilloscope, Two L.P.F.
·Measuring Points	·E, F, REFOUT
·Disc	·ABEX TCD-784
·Mode	·TEST MODE
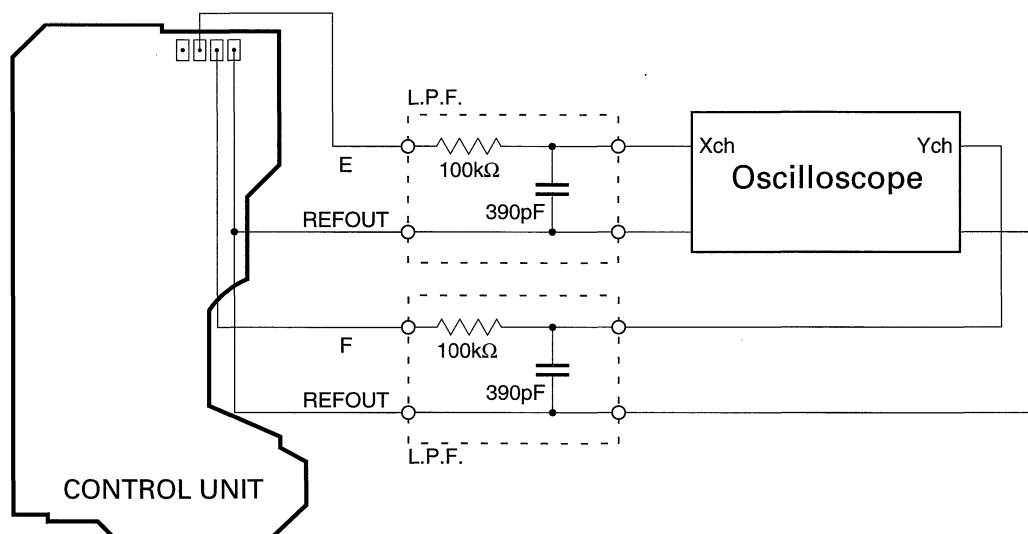
·Checking Procedure
1. In test mode, load the disc and switch the 5V regulator on.
2. Using the → and ← buttons, move the Pickup unit to the innermost track.
3. Press key **3** to close focus, the display should read "91". Press key **2** to implement the tracking balance adjustment the display should now read "81". Press key **3** 4 times. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the Pickup unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

·Note
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

·Hint
Reloading the disc changes the clamp position and may decrease the "wobble".

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Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

0°
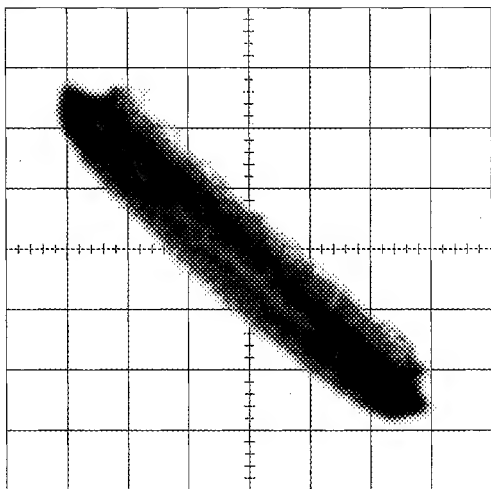
30°
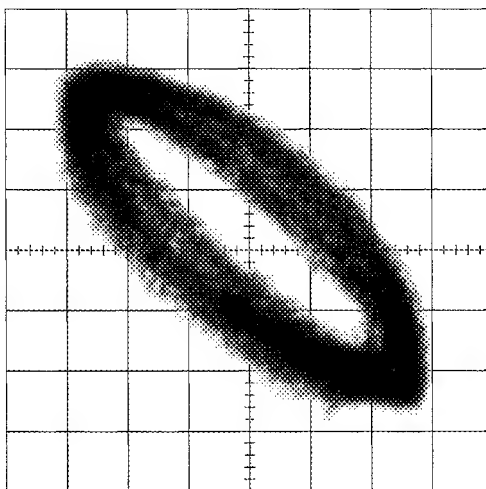
45°
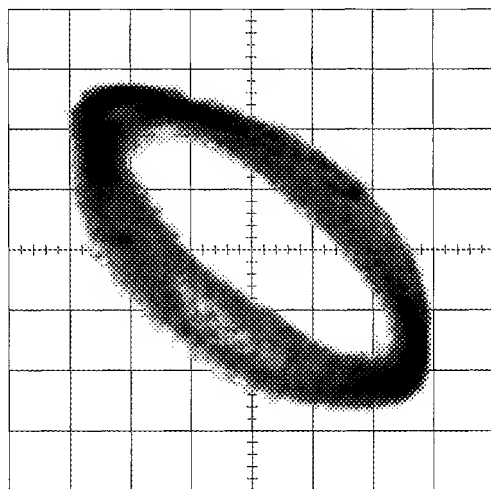
60°
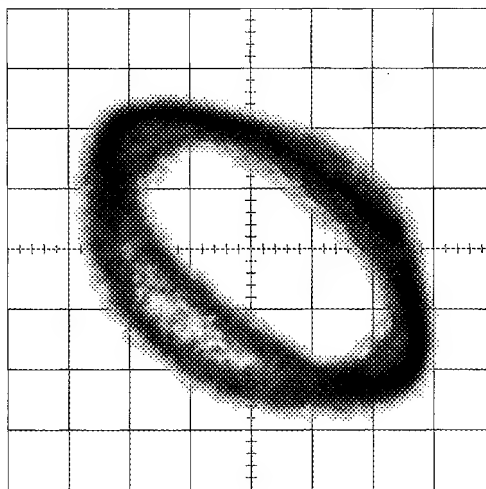
75°
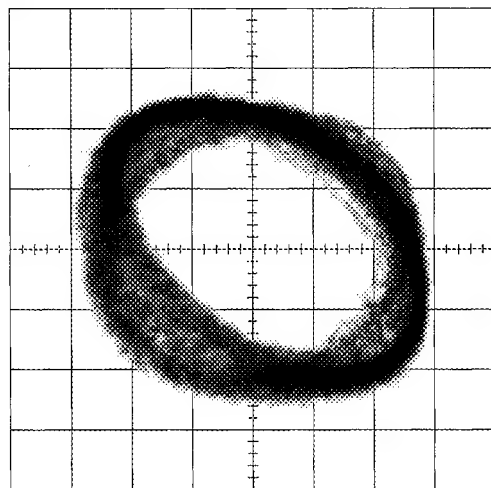
90°
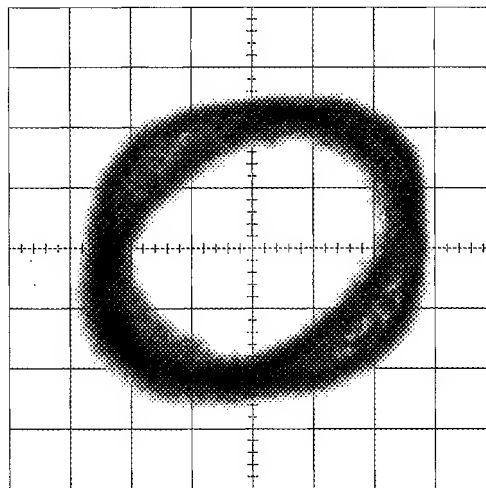
7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

PA4023B
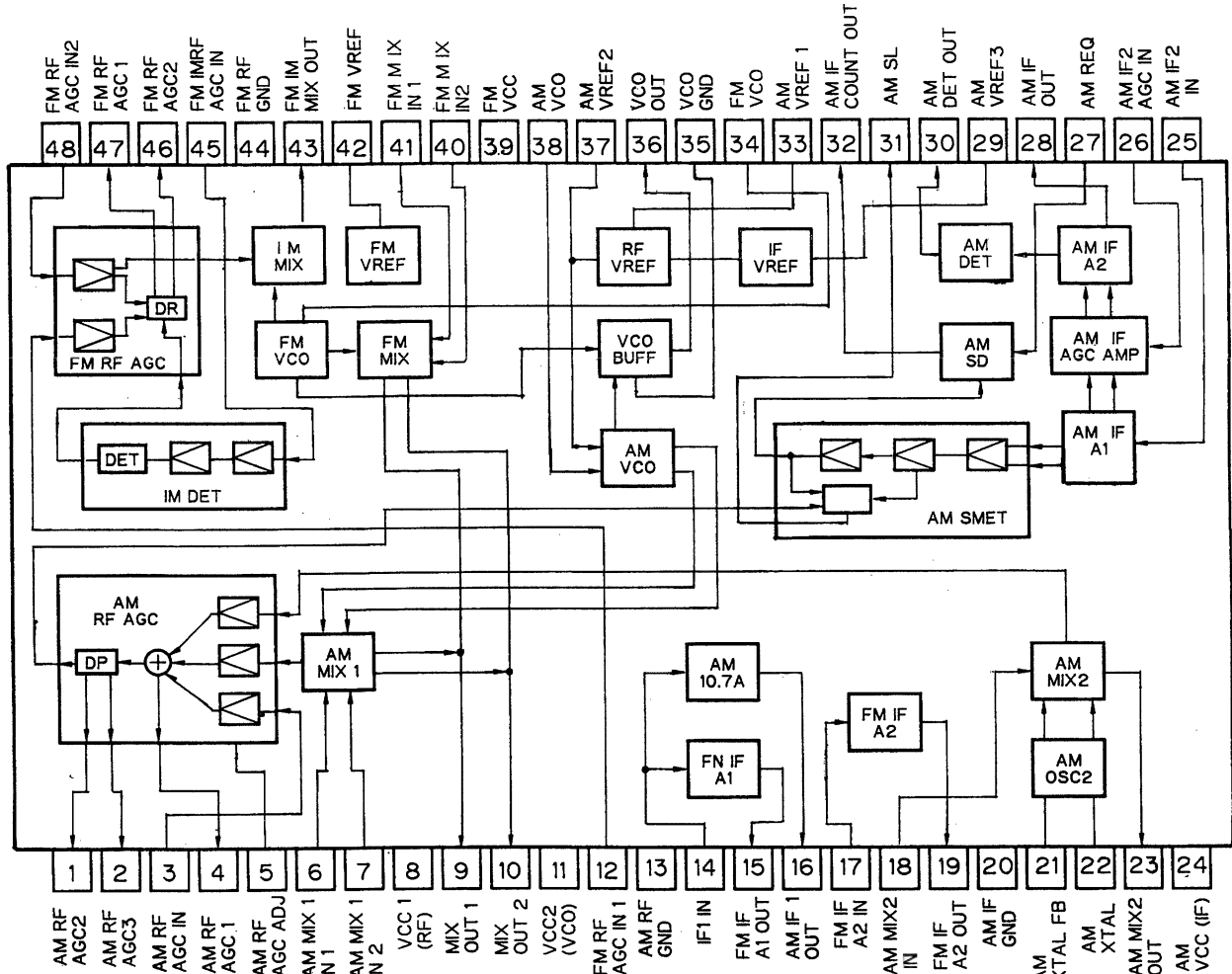
● **Pin Functions (UPC2572GS)**

Pin No.	Pin Name	I/O	Function and Operation
1	EFM-IN	I	EFM comparator input
2	AGC-OUT	O	AGC amplifier output
3	C. AGC		Connects AGC peak detection condenser
4	RF-IN	I	RF signal DC component cut input
5	RF-OUT	O	RF amplifier output
6	RF-	I	RF amplifier inverted input
7	C1, 3T		Connects RF3T component detection condenser
8	C2, 3T		Connects RF3T component detection condenser
9	Vcc		Power supply
10	A	I	A signal input
11	C	I	C signal input
12	B	I	B signal input
13	D	I	D signal input
14	F	I	F signal input
15	E	I	E signal input
16	PD	I	APC amplifier input
17	LD	O	APC amplifier output

DEH-68,635,58,535,53

Pin No.	Pin Name	I/O	Function and Operation
18	LDON	I	Laser diode ON/OFF input
19	VREF-OUT	O	Reference voltage output
20	VREF-IN	I	Reference voltage input
21	DET-OUT	O	Vibration detection circuit output
22	DET-IN	I	Vibration detection circuit input
23	TE-OUT2	O	Tracking error amplifier output (fourfold gain)
24	TE-OUT1	O	Tracking error amplifier output (singlefold gain)
25	TE-	I	Tracking error amplifier inverted input
26	GND		GND
27	FE-	I	Focus error amplifier inverted input
28	FE-OUT	O	Focus error amplifier output
29	C.FE	I	Focus error signal DC component cut input
30	3T-OUT	O	RF3T component output
31	MIRR	O	MIRR signal output
32	RFOK	O	RFOK signal output
33	DEFECT	O	DEFECT signal output
34	C. DEF		Connects DEFECT signal detection condenser
35	EFM-OUT	O	EFM comparator output
36	ASY	I	EFM comparator level input
37	TE-BAL	I	Tracking balance control
38	FE-BAL	I	Focus balance control

UPC2572GS
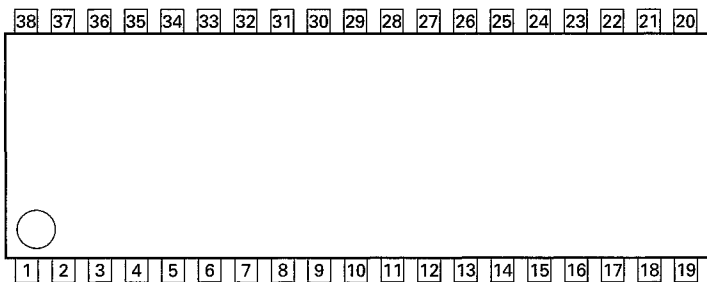
IC's marked by* are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

*UPD63702GF
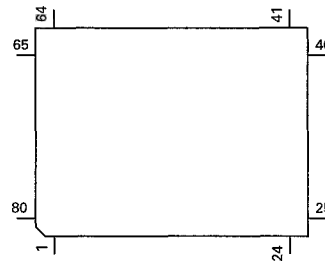
● Pin Functions (UPD63702GF)

Pin No.	Pin Name	I/O	Function and Operation
1	D.VDD		Supplies current of positive voltage to the logic circuits
2	RST	I	System reset input pin
3	AO	I	Microcomputer interface AO="L": STB active and set to address register AO="H": STB active and set to parameter
4	STB	I	Signal to latch serial data within the LSI
5	SCK	I	Clock input pin to input and output serial data
6	SO	O	Outputs serial data and status signal
7	SI	I	Serial data input pin
8	D.GND		Logic circuit GND
9	X.GND		Crystal oscillation circuit GND
10	XTAL	I	Crystal oscillator connection pin
11	XTAL	O	Crystal oscillator connection pin
12	X.VDD		Supplies current of positive voltage to the crystal oscillation circuit
13	DA.VDD		Supplies current of positive voltage to the D/A converter
14	R+	O	Right channel analog audio data output pin
15	R-	O	Right channel analog audio data output pin
16,17	DA.GND		D/A converter GND
18	L-	O	Left channel analog audio data output pin
19	L+	O	Left channel analog audio data output pin
20	DA.VDD		Supplies current of positive voltage to the D/A converter
21	D.VDD		Supplies current of positive voltage to logic circuit

Pin No.	Pin Name	I/O	Function and Operation
22	FLAG	O	Flag output pin to indicate that audio data currently being output consists of noncorrectable data
23	WDCK	O	Pin to output double the frequency of LRCK
24	C16M	O	Pin to output the clock
25	EMPH	O	Output pin for the pre-emphasis data in the sub-Q code
26	DIN	I	Input pin for serial audio data
27	DOUT	O	Output pin for the serial audio data
28	SCKO	O	Output pin for the clock for the serial audio data
29	LRCK	O	Signals to distinguish the right and left channels of the audio data output from DOUT. Frequency is 44.1kHz at 50% duty at normal regeneration
30	TX	O	Output pin for the digital audio interface data
31	CTLV	I	Oscillation control pin for high-frequency clock generation VCO used for the digital PLL upon regeneration at fast speed of 2- or 4-fold
32	POUT	O	Output point for phase comparison
33	D.GND		GND for the logic circuit
34	VCO	I	Input pin for the inverter
35	$\overline{VCO}$	O	Output pin for the inverter
36	D.VDD		Supplies current of positive voltage to the logic circuit
37	PLCK	O	Pin for monitoring the bit clock
38	LOCK	O	Indicates "H" when the synchronized pattern detection signal matches the frame counter output at the EFM recovery modulation, and "L" when they don't match
39	WFCK	O	Minute-cycle signal for the bit clock, the signal indicates the cycle of 1 frame (approx. 7.35kHz)
40	RFCK	O	Minute-cycle signal for the clock, the signal indicates cycle of 1 frame (approx. 7.35kHz)
41	D.GND		GND for the logic circuit
42,43	TEST0,1	I	Test pins
44,45	TM2, TM4	I	Pins for controlling regeneration at fast speed of 2- or 4-fold
46-49	T4-T7	I	Test pins
50,51	C1D1, C1D2	O	Output pin for indicating the C1 error correction results
52-54	C2D1-C2D3	O	Output pin for indicating the C2 error correction results
55	D.VDD		Supplies current of positive voltage to the logic circuit
56	SFSY	O	Outputs 1 word of the subcode. Generally, 1 cycle is approx 136 micro seconds
57	SBSY	O	The signal indicates the beginning of the subcode block. The SFSY signal is output at high level every 98 times
58	SBSO	O	Output pin for the subcode data
59	SBCK	I	Input pin for the clock signal for read-out of the subcode data
60	A.GND		GND for the analog circuit
61	MD	O	Output pin for the spindle drive
62	SD	O	Output pin for the sled drive
63	TD	O	Output pin for the tracking drive
64	FD	O	Output pin for the focus drive
65	FBAL	O	Output pin for the focus balance control
66	TBAL	O	Output pin for the tracking balance control
67	A.VDD		Supplies current of positive voltage to the analog circuit
68	TBC	I	Switches coefficient banks for the tracking filter
69	EFM	I	Input pin for the EFM signal
70	HOLD	I	Input pin for the hold control signal
71	RFOK	I	Input pin for the RFOK signal
72	MIRR	I	Input pin for the MIRR signal
73	A.GND		GND for the analog circuit
74	HOME	I	Home position detector input
75	VR1	I	The signal input through these pins is digitized to 8-bit by the A/D converter, which by operation of the assigned register, can be read into the microcomputer
76	FE	I	Inputs a focus-error signal from the RF amplifier
77	TE	I	Inputs a tracking-error signal from the RF amplifier
78	TEC	I	Input pin for the tracking comparator
79	REFOUT	O	Output point for midpoint potential for the A/D converter for the LSI portion
80	A.VDD		Supplies current of accurate voltage to the analog circuit

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XLA6997FP

Pin	Label
28	GND
27	OUT4-,
26	OUT4-I
25	IN4*
24	IN4'
23	IN4
22	VCC
21	VCC
20	IN3
19	IN3'
18	IN3*
17	OUT3-
16	OUT3-
15	GND

Thermal Shut Down

TEMPERATURE MONITOR
REGULATOR SWITCH
DRIVER MUTE
BIAS

Pin	Label
1	OUT1-A
2	OUT1-B
3	IN 1
4	IN 1'
5	REG-B
6	REG. OUT
7	REG. GND
8	BIAS
9	MUTE
10	REG. SW
11	TEMP. MON
12	IN2
13	OUT2-B
14	OUT2-A

XLA6285FP

Pin	Label
24	
23	
22	
21	
20	VREF
19	RIN
F I N	
18	POWEI SAVE
17	FIN
16	VCC
15	VM
14	
13	

POWER SAVE

CONTROL LOGIC

TSD

Pin	Label
1	
2	
3	
4	
5	OUT2
6	RNF
F I N	
7	GND
8	OUT1
9	
10	
11	
12	

*SN761027DL

Pin	Label
48	VCC
47	IN1-R
46	IN2-R
45	IN3-R
44	IN4-R
43	SW out-R
42	ZC in-R
41	LOUD-R
40	VR in-R
39	TREB-CNT-R
38	TREB-L-R
37	TREB-DIF-R
36	BASS-CNT-R
35	BASS-L-R
34	BASS-DIF-R
33	TONE out-R
32	FADER in-R
31	FRONT out-R
30	REAR out-R
29	AVcc
28	DVcc
27	DATA
26	CLK
25	STB

4 CHANNEL INPUT SELECTOR — LOUD & EVR — 2 BANDS TONE CONTROL — FADER — FRONT BUFFER 5.1dB / REAR BUFFER 5.1dB

WINDOW DETECTOR   5.75 VOLTAGE REGULATOR

4 CHANNEL INPUT SELECTOR — LOUD & EVR — 2 BANDS TONE CONTROL — FADER — REAR BUFFER 5.1dB / FRONT BUFFER 5.1dB

SERIAL DATA CONTROLLER FOR VOLUME & SWITCH

Pin	Label
1	A GND
2	IN1-L
3	IN2-L
4	IN3-L
5	IN4-L
6	SW out-L
7	ZC in-L
8	LOUD-L
9	VR in-L
10	TREB-CNT-L
11	TREB-L-L
12	TREB-DIF-L
13	BASS-CNT-L
14	BASS-L-L
15	BASS-DIF-L
16	TONE out-L
17	FADER in-L
18	FRONT out-L
19	REAR out-L
20	Vref in
21	A GND
22	D GND
23	Ct
24	Vt in

TDA7386

PM2005B

● Pin Functions (PD4808B, PD4721B)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	DSCSNS	I		Disc insertion detection input
2	ST	I		Stereo input
3	ISENS	I		Illumination sensor input
4	AVSS			Connect to GND.
5	VCAOUT	O		Analog output for SUBW electronic volume control
6	SD	I		SD signal input
7	AVREF1			Connect to VDD.
8	KYDT	I		Grille microprocessor communications data input
9	DPDT	O	C	Grille microprocessor communications data output
10	SWVDD	O	C	Grille power output
11	RIDDI	I		RDS/ID logic communications data input
12	RIDDO	O	C	RDS/ID logic communications data output
13	RIDCK	O	C	RDS/ID logic communications clock output
14	RIDRST	O	C	RDS/ID logic reset output
15	RIDSEL	O	C	RDS/ID logic select output
16	XSI	I		Serial data input to CD LSI
17	XSO	O	C	Serial data output to CD LSI
18	XSCK	O	C	Serial clock output to CD LSI
19	XSTB	O	C	CD LSI strobe output
20	CD5VON	O	C	CD (5 V) power control output
21	XAO	O	C	CD LSI command/data control output
22	XRST	O	C	CD LSI reset control output
23	CONT	O	C	Servo driver power control output
24	VDCONT	O	C	VD power control output
25	DIMMER	O	C	Dimmer control output
26	CDEJET	O	C	Load Motor Eject control output
27	CDLOAD	O	C	Load Motor Load control output
28	LOCK	I		Spindle lock detection input
29	FOK	I		Focus OK input
30	DRELAY	O	C	Output for external relay

DEH-68,635,58,535,53

Pin No.	Pin Name	I/O	Format	Function and Operation
31	DRSENS	I		Door open/closed sensor input
32	DRSYS	O	C	Door system change output
33	VSS			(GND)
34	CLAMP	I		Disc clamp
35	FIEOUT	O	C	FIE ON/OFF control output
36	SUBW0	O	N	Subwoofer cutoff frequency selection output 0
37	SUBW1	O	N	Subwoofer cutoff frequency selection output 1
38	TMUTE	O	N	Tuner mute output
39	DLED	O	N	LED output for alarm
40	MIRR	I		Mirror surface detection input
41	VST	O	C	Electronic VOL strobe output
42	VCK	O	C	Electronic VOL clock output
43	VDT	O	C	Electronic VOL data output
44	ILMPW	O	C	Illumination power output
45	PEE	O	C	PEE ON oscillation output
46	MUTE	O	C	General mute output
47	SYSPW	O	C	System power output
48	TUNPCK	O	C	PLL IC clock
49	TUNPDO	O	C	PLL IC data output
50	TUNPCE	O	C	PLL IC chip enable
51	TUNPDI	I		PLL IC data input
52	MODEL2	I		Destination selection 2
53	LCDPW	O	C	LCD backlight power output
54	FM	O	C	FM output
55	AM	O	C	AM output
56	SUBWMUTE	O	C	Subwoofer mute output
57	DLSENS	I		Centralized door lock release sensor input
58	STOUT	O	C	Output for starter motor cutoff
59	TUNANT	O	C	Tuner power output
60	RESET			Reset
61	RIDRDY	I		RDS/ID logic ready input
62	BSENS	I		Backup input
63	ASENS	I		ACC sensor input
64	DSENS	I		Detachment sensor input
65	MOSENS	I		Motion/window damage sensor input
66	CLKIN	I	C	8 Hz clock input for clock
67	CDPW	O	C	CD power control output
68	VDD			VDD
69	X2			Oscillator output
70	X1			Oscillator input
71	IC			Connect to GND.
72	XT2			Subclock terminal
73	TESTIN	I		Test mode
74	AVDD			Analog power supply of A/D convertor
75	AVREF0			Reference voltage input of A/D convertor
76	SL	I		Signal level input
77	MODEL1	I		Destination identification 1
78	VDSENS	I		VD power top/ground fault sensor input
79	TEMP	I		Temperature sensor input
80	EJTSNS	I		Disc Eject position detection input

*PD4808B, PD4721B
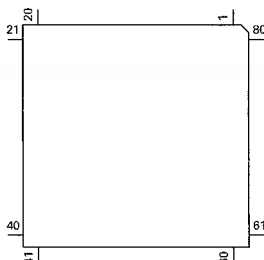
Format	Meaning
C	C MOS
N	N channel open drain

● Pin Functions (PD6194A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1-8	NC	O	N	Not used
9	OE	O	N	ROM output control
10	ROMEN	O	N	ROM enable
11	ADD17	O	N	ROM address #17
12	AVCC			5V power supply input
13	AVR			5V power supply input
14	AVSS			Connect to GND
15	IRSEL	I		Select input
16-19	NC	I		Not used
20	IRRST	I		Reset input
21,22	MOD0,1			Connect to GND
23	XIN			Oscillator input
24	XOUT			Oscillatro output
25	VSS			Connect to GND
26-28	NC	O	C	Not used
29	IRRDY	O	C	Communications ready output
30-33	ADD16-13	O	C	Rom address #16-#13
34-41	ADD7-0	O	C	Rom address #7-#0
42-49	DT7-0	I		Rom data #7-#0 input
50	VSS			Connect to GND
51	TEST	I		Test program input
52	IRSCK	I		Communications clock input
53	IRDO	O	C	Communications data output
54	IRDI	I		Communications data input
55,56	NC	O	C	Not used
57	VCC			5V power supply input
58,59	NC	O	C	Not used
60-64	ADD8-12	O	N	ROM address #8-#12

*PD6194A
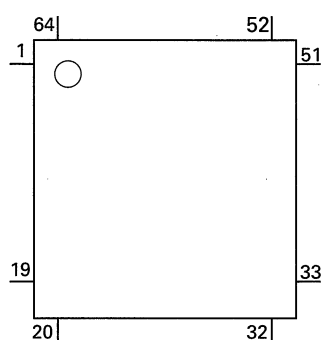
Format	Meaning
C	C MOS
N	N channel open drain

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*PD8027A

```
       ┌──────────────────┐
  NC │1│  ◯              │32│ VCC
 A16 │2│                 │31│ A18
 A15 │3│                 │30│ A17
 A12 │4│  A0-A18 :Address input │29│ A14
  A7 │5│  D0-D7  :Data output   │28│ A13
  A6 │6│  CE̅     :Chip enable    │27│ A8
  A5 │7│  OE̅     :Output enable  │26│ A9
  A4 │8│                 │25│ A11
  A3 │9│                 │24│ OE̅
  A2 │10│                │23│ A10
  A1 │11│                │22│ CE̅
  A0 │12│                │21│ D7
  D0 │13│                │20│ D6
  D1 │14│                │19│ D5
  D2 │15│                │18│ D4
 VSS │16│                │17│ D3
       └──────────────────┘
```
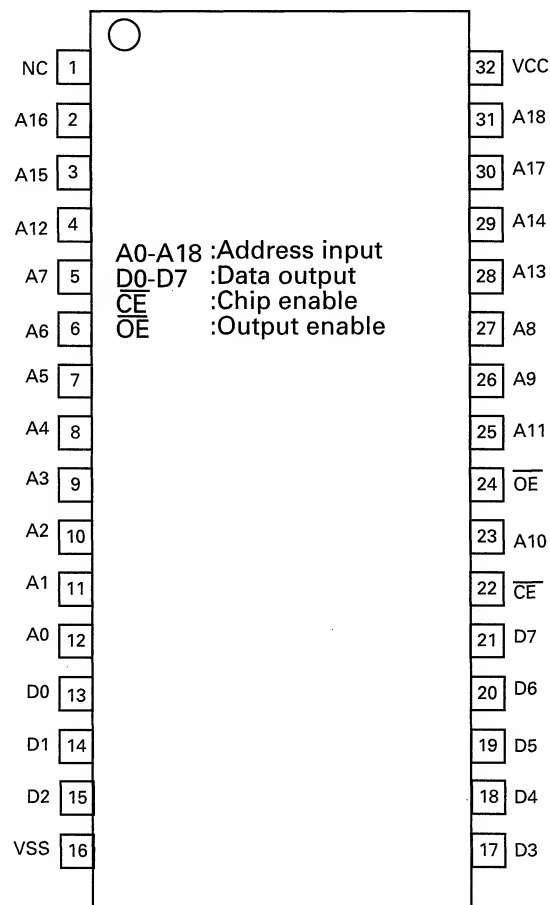
● Pin Functions (PD6196A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1-5	SEG4-0	O		LCD segment output
6-9	COM3-0	O		LCD common output
10	V3			LCD driver power supply
11-14	KS4-1	O	N	Key strobe output
15,16	KD1,2	I		Key data input
17	REM	I		Remote-control input
18	SI	I		UART input
19	RST̅	I		System reset input
20	SO	O	C	UART output
21	MODA	I		Connect to VSS
22,23	X0,1			Connect to oscillator
24	VSS			GND
25,26	KD3,4	I		Key data input
27,28	KS6,5	O	N	Key strobe output
29-55	SEG39-13	O		LCD segment output
56	VCC	O		Power supply
57-64	SEG12-5	O		LCD segment output

*PD6196A

Format	Meaning
C	C MOS
N	N channel open drain

RS-140

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7.1.2 DISPLAY

● CAW1393

SEGMENT

COMMON

Fig. 26
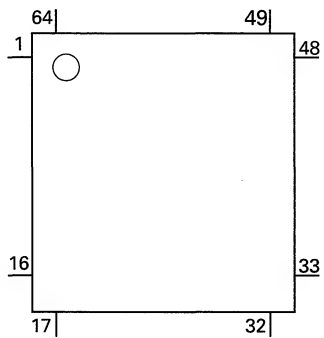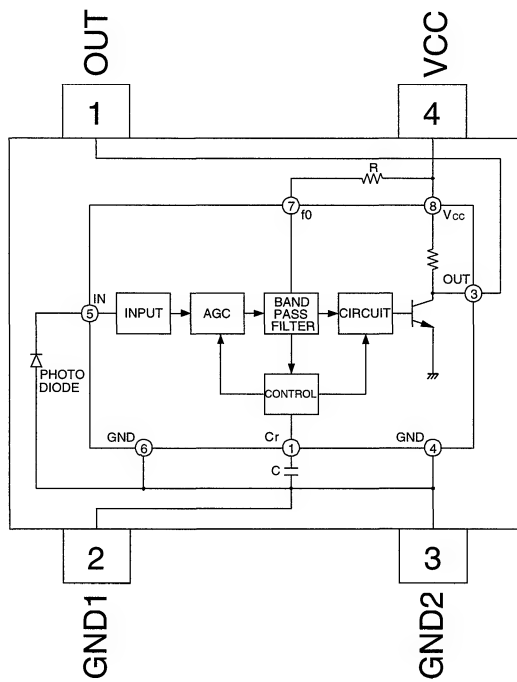
7.2 DIAGNOSIS
7.2.1 DISASSEMBLY

● Removing the Case(Not shown)

1. Remove the two screws.
2. Insert and turn a flat screwdriver at locations indicated by arrows to remove the case.

● Removing the Detach Grille Assy(Fig.27)

1. Press the detach button, and then pull Detach Grille Assy.

● Removing the Panel Assy(Fig.27)

1. Disconnect the two stoppers indicated by arrows, and then remove the Panel Assy.

● Removing the CD Mechanism Module(Fig.27)

1. Remove the four screws.
2. Disconnect the connector.
3. Remove the CD Mechanism Module.
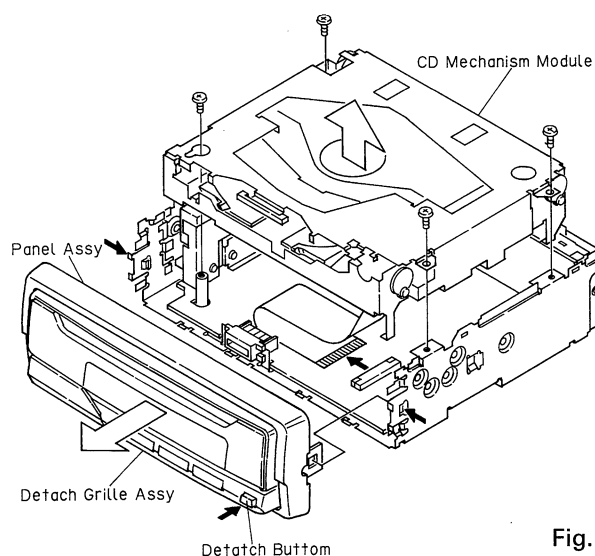
Fig. 27

● Removing the Chassis Unit(Fig.28)

1. Remove the two screws A, two screws B, screw C and screw D.
2. Stretch the three claws, and then remove the Chassis Unit.
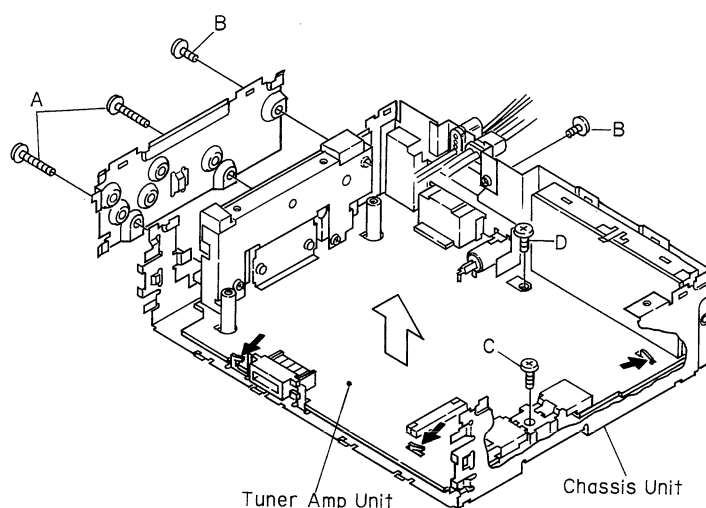
Fig. 28

7.2.2 TEST MODE

● CD Test Mode

1)Precautions

· This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to REFO(approx. 2.5V) instead of GND.

If REFO and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.

Do not connect the negative probe of the measuring equipment to REFO and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to REFO with the channel 2 negative probe connected to GND.

Since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.

If by accident REFO comes in contact with GND, immediately switch the regulator or power OFF.

· Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.

· Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.

· Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.

· Test mode starting procedure
Switch ACC, back-up ON while pressing the **4** and **6** keys together.

· Test mode cancellation
Switch ACC, back-up OFF.

· Disc detection during loading and eject operations is performed by means of a photo transistor in this unit.Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.
*During PLAY, even if the eject button is pressed,the disc will not be ejected and the unit will remain in the PLAY mode.
*The unit will not load a disc.
When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

· When loading and unloading discs during adjustment procedures, always wait for the disc to be properly clamped or ejected before pressing another key. Otherwise, there is a risk of the actuator being destroyed.

· Turn power off when pressing the button → or the button ← key for focus search in the test mode. (Or else lens may stick and the actuator may be damaged.)

· SINGLE/4TRK/10TRK/32TRK will continue to operate even after the key is released.Tracking is closed the moment C-MOVE is released.

· JUMP MODE resets to SINGLE as soon as power is switched OFF.

● Flow Chart

4 **6**

← ACC,Back-up ON

CD Player Select (SOURCE)

<Regulator OFF>
TRACK

Display

During regulator off,press the 6 key and the system will be put into the new test mode.

(BAND)

<Regulator ON>
TRACK **00 00'00"** *1

Power ON   Display

6

Power OFF
(BAND)   **3**   **6**   **1**   (→)   (←)

<Close focus>   Focus mode select *1

TRACK **91 91'91"**

Display

<Close tracking >   Carriage shifted outwards while this key is pressed   Carriage shifted inwards while this key is pressed

2

Tracking balance   Display   TRACK **81 81'81"**

Power OFF
(BAND)   **1**   **6**   **3**   (→)   (←)

<Close tracking >   <Close tracking >

*2
Display example   TRACK **01 02'56"**

<Close spindle> (Rough) *5   Carriage shifted outwards while this key is pressed   Carriage shifted inwards while this key is pressed

Power OFF
(BAND)   Carriage move or T. jump (→)   Carriage move or T. jump (←)   **6**   **1**   **3**   **2**

*3   AGC display *2 select   AGC   Tracking open

*4

Power OFF
(BAND)   **2**

Tracking open (in the case of continuous jumping)

Display   →Single→ 4TRK→10TRK→ 32TRK→100TRK→C.MOVE→
81   82   83   84   85   86
Select T.Jump Mode

*1   ┌Normal focus close→ S curve check→ Focus EQ check ┐
00   01   02

*2   ┌Normal display→Focus gain → Track gain ┐

*3 100 TRK jump & carriage move continue only while the keys are pressed

*4 SINGLE/4/10/32 → continuous even after key release

*5   ┌Normal display → Focus gain → Tracking offset → Tracking balance ┐
(Close spindle-rough)

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● **Error Number Indication**

If the CD should fail to operate or if an error has taken place during operation the player will enter into the error mode, and the cause of the error will be numerically indicated.

This is aimed at assisting in analysis or repair.

(1) Basic Means of Display

· With ERROR indicated in "MODE" on IP-BUS Display data, an error code is transmitted by the use of MIN and SEC. The MIN and SEC data will be identical.

· Examples of Display   ERROR-XX

(2) Error Codes

Error Code	Classification	Description	Cause/Detail
10	ELECTRIC	Carriage home failure	Carriage doesn't move to or from the innermost position →Home switch failed and/or carriage immobile
11	ELECTRIC	Focus failure	Focus failed →Defects, disc upside-down, severe vibration
12	ELECTRIC	SETUP failure Subcode failure	Spindle failed to lock or subcode unreadable →Spindle defective, defect, severe vibration
14	ELECTRIC	Mirror failure	Unrecorded CD-R The disc is upside-down, defects, vibration
17	ELECTRIC	Set up failure	AGC protect failed →Defects, disc upside-down, severe vibration
19	ELECTRIC	Set up failure	Tracking error waveform is too unbalanced (>50%) or level is too small →The P.U.unit or tracking error circuitry is N.G.
30	ELECTRIC	Search time out	Failed to reach target address →Carriage/tracking defective and/or defects
A0	SYSTEM	Power failure	Power overvoltage or short circuit detected →Switching transistor defective and/or power abnormal

"defects" means scratches, dirt etc an the surface of the disc.

● **New Test Mode(aging operation and setup analysis)**

The single CD player plays in normal mode. After being set up, it will display FOK (focus), LOCK (spindle), subcode, sound skip, protection against a mechanical error or the like, occurrence of an error, cause and time of an expiry, if any, (and disc number).

During the setup, the CD software operation status (internal RAM and C-point)is displayed.

(1) How to enter NEW TEST Mode

See the test mode flow chart Page 73.

(2) Relations of keys between TEST and NEW TEST Modes

Keys	Test Mode			New Test Mode
	Regulator OFF	Regulator ON	PLAY in progress	Error Occurred, Protection Activated
BAND	Regulator ON	Regulator OFF	—	Time of occurrence / cause of error select
→	—	FWD-KICK	TRACK+ / FF	—
←	—	REV-KICK	TRACK- / REV	—
1	—	TRACKING CLOSE	SCAN	—
2	—	TRACKING OPEN	REPEAT	—
3	—	FOCUS CLOSE	RANDOM	—
6	To New Test Mode Select	FOCUS MODE	AUTO/MANU	—

Operations, such as EJECT, CD ON/OFF, etc. are performed normally.

(3) Error Cause (Error Number) Code

Error Code	Classification	Mode	Description	Cause	Detail
40	ELECTRIC	PLAY	FOK=L 100ms	Put out of focus	Scratch,
41	ELECTRIC	PLAY	LOCK=L 100ms	Spindle unlock	Stain,
42	ELECTRIC	PLAY	Subcode unacceptable 500ms	Failed to read subcode	Vibration, Servo defect,
43	ELECTRIC	PLAY	Sound skipped	Last address memory operated	etc...

(4) Indicating an Operation Status During Setup

Status No.	Description	Protection operation
01	Carriage home mode started	None
02	Carriage moving inwards	10-second time out, Home switch failed
03	Carriage moving outwards	10-second time out, Home switch failed
05	Carriage moving outwards	None
11	Setup started	None
12	Spindle turn/Focus search started	None
13	Waiting for focus closure (XSI=L)	Failure to close focus
10,14	Waiting for focus closure (FOK=H)	Failure to close focus
15, 16, 17	Focus closed, Tracking open	Focus disrupted
18	During focus AGC Subcode waiting	Focus disrupted
19	During tracking AGC	Disrupted focus
20	Waiting for MIRR, LOCK or subcode read Carriage closed, SPINDLE=ADAPTIVE	Focus disrupted, MIRR NG, Failure to lock, Failed to read subcode

(5) Example of Display.

·SET UP in progress

TNo.	Min	Sec
91	91	91

·Operation (PLAY, SEARCH, etc.) in progress perfectly identical with that in the normal mode.

·Protection/Error upon occurrence
(a) Error number indicated

ERROR–xx

(b) Track number and absolute time indicated

TNo.	Min	Sec
10	40	05
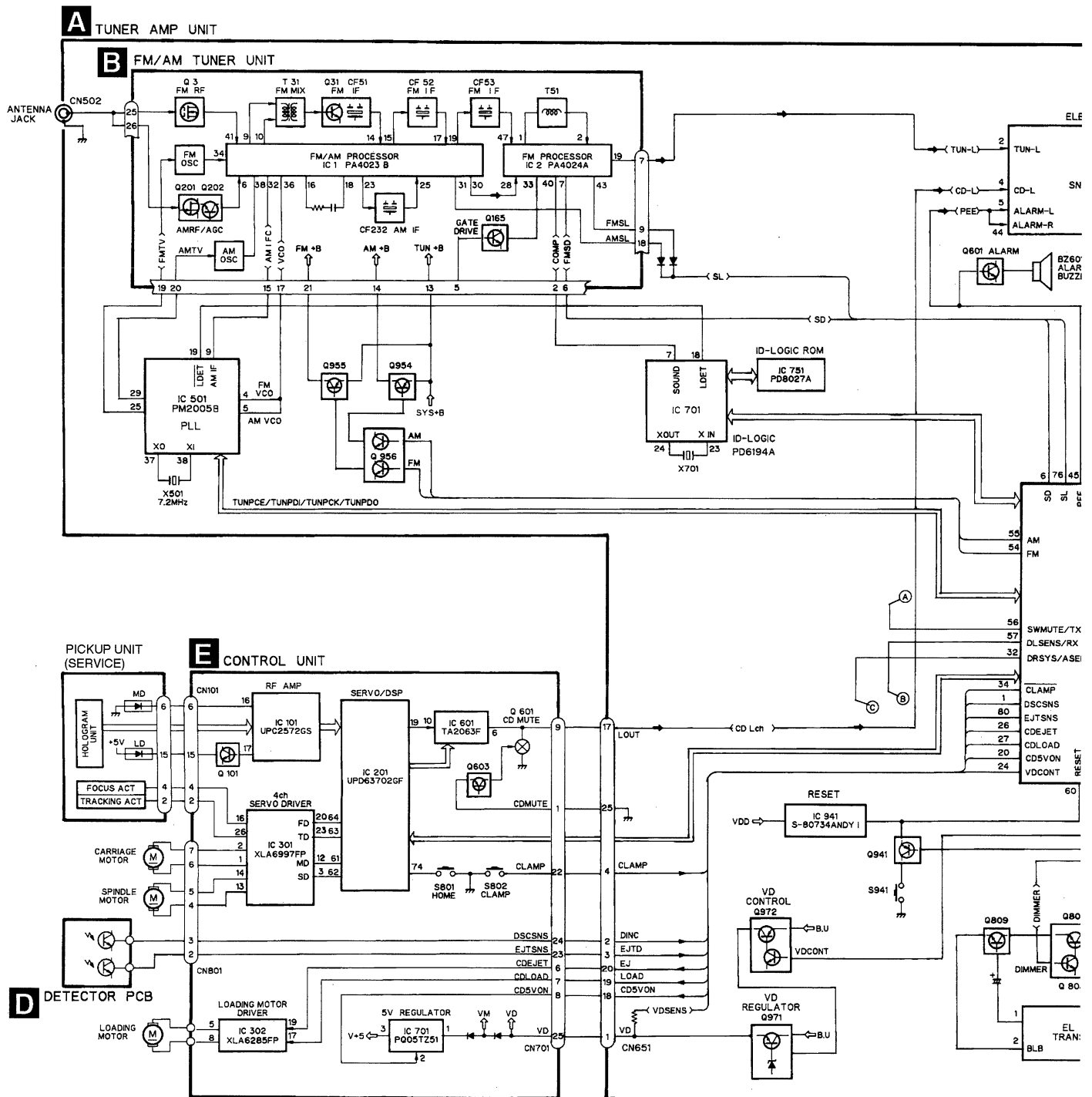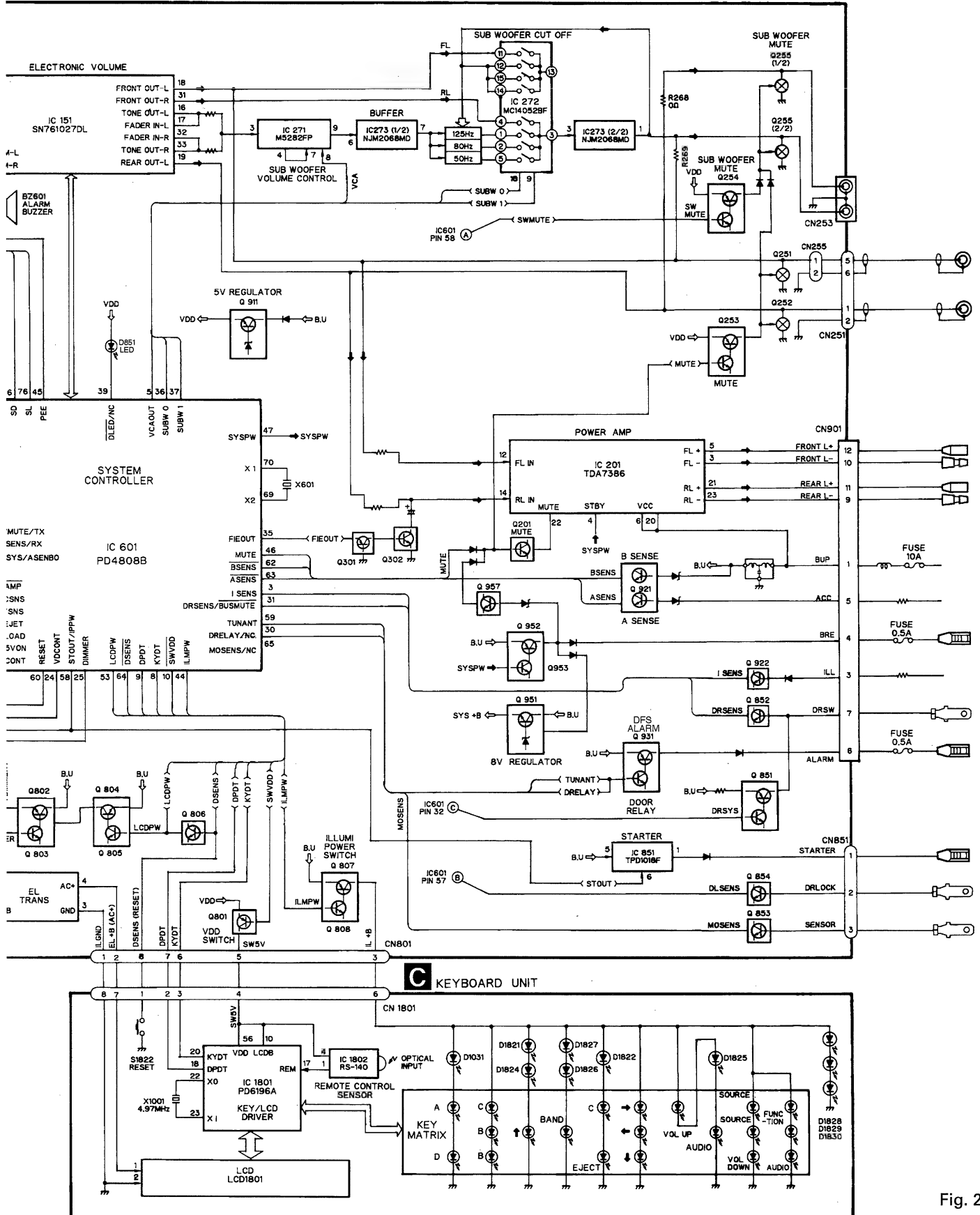
Select the display with the BAND key.

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7.3 BLOCK DIAGRAM

Fig. 29

Connecting the Units
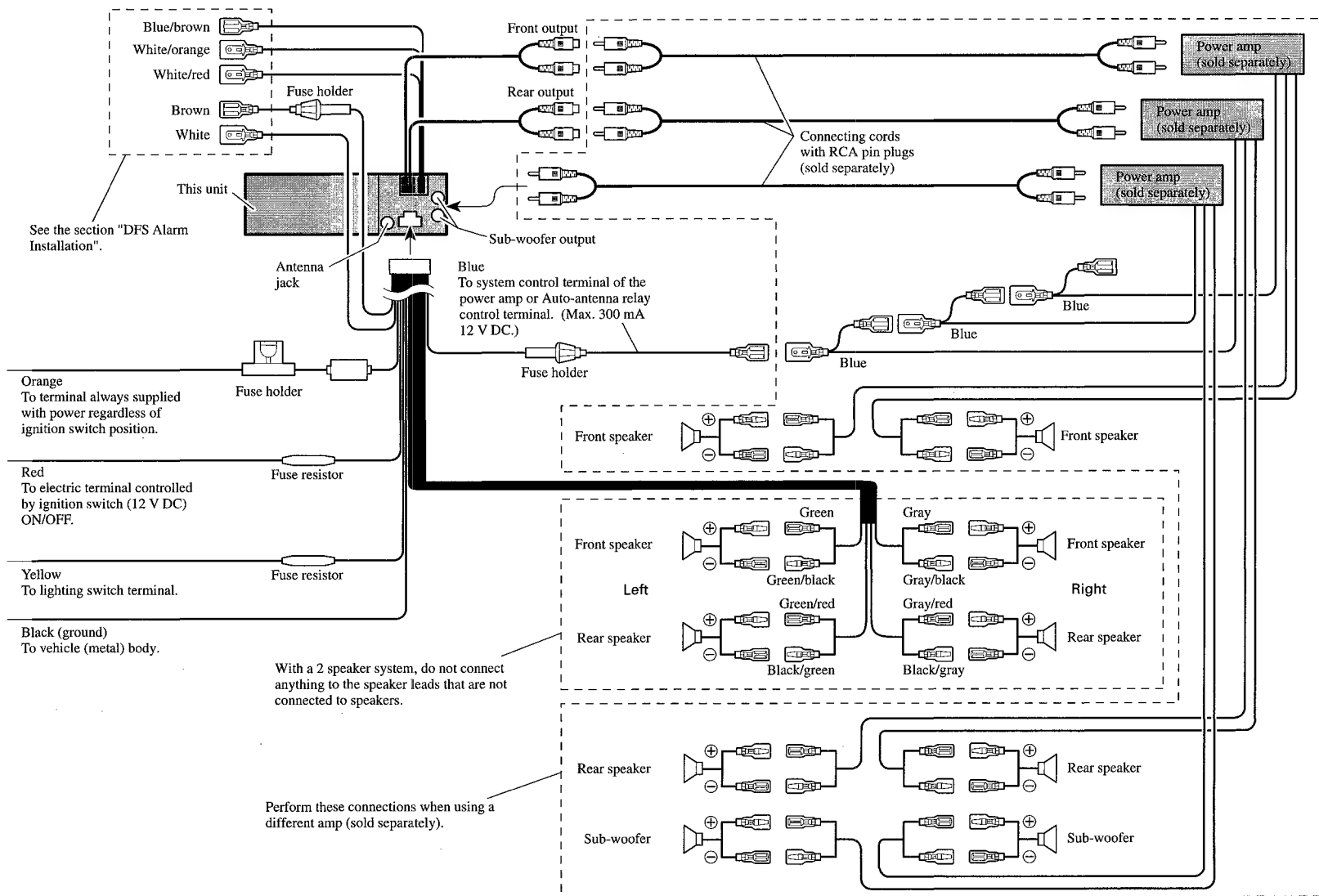
Blue/brown

White/orange

White/red

Brown

Fuse holder

White

See the section "DFS Alarm Installation".

This unit

Antenna jack

Front output

Rear output

Connecting cords
with RCA pin plugs
(sold separately)

Power amp
(sold separately)

Power amp
(sold separately)

Power amp
(sold separately)

Sub-woofer output

Blue
To system control terminal of the
power amp or Auto-antenna relay
control terminal. (Max. 300 mA
12 V DC.)

Blue

Blue

Blue

Fuse holder

Blue

Orange
To terminal always supplied
with power regardless of
ignition switch position.

Fuse holder

Red
To electric terminal controlled
by ignition switch (12 V DC)
ON/OFF.

Fuse resistor

Front speaker

Front speaker

Yellow
To lighting switch terminal.

Fuse resistor

Front speaker

Green

Gray

Front speaker

Black (ground)
To vehicle (metal) body.

Left

Green/black

Gray/black

Right

With a 2 speaker system, do not connect
anything to the speaker leads that are not
connected to speakers.

Rear speaker

Green/red

Gray/red

Rear speaker

Black/green

Black/gray

Rear speaker

Rear speaker

Perform these connections when using a
different amp (sold separately).

Sub-woofer

Sub-woofer

Fig. 30

Affix the included deterrent stickers to the inside of the front door windows.

Description

■ **White (DOOR SWITCH)** .... **(Fig. 31 & 32)**

This lead is used to trigger DFS Alarm when any door is opened and may be connected to either positive or negative (+/–) type door pin switches.

■ **Brown (ALARM OUTPUT)** .... **(Fig. 33)**

This lead is a selectable constant or pulsed positive (+) output capable of driving up to 2 relays (500 mA) max. Use this lead to trigger relays for siren, horn, honk or flashing lights.

■ **White/Red (ALARM SENSOR)** .... **(Fig. 34)**

This lead is a negative (–) input and is provided for hookup of negative triggering sensors such as shock, or glass sensors (sold separately).

■ **White/Orange (DOOR LOCK)** .... **(Fig. 35)**

This lead is used to disarm DFS Alarm from power door lock systems or alarm systems with remote unlock. This lead may be connected to door lock systems with either positive or negative (+/–) unlock triggers.

■ **Blue/Brown (STARTER CUT-OFF)** .... **(Fig. 36)**

This lead provides a positive (+) constant output when DFS Alarm is triggered and remains constant for 30 minutes or until DFS Alarm is disarmed. This output should be used with an optional relay to disable starter.

Door Switches

The DFS Alarm's door trigger input is designed to work with either positive or negative door pin switches. After hookup, simply set door system type from DFS Alarm Setting Menu.
Domelight Delay-DFS Alarm will wait for last door to close and courtesy light to turn off before Exit Delay Timer Starts.

DOOR SWITCH (White)

■ **Grounding Type Switch:**

GM, Chrysler, Japanese, and most European vehicles

Note:
• Set DFS Alarm to recognize ground trigger from DFS Alarm Setting Menu. Set Door System to "DR-L :CLS".

This unit

Blue/Brown
(refer to "STARTER CUT-OFF".)

White/Orange (refer to "DOOR LOCK".)

White/Red (refer to "ALARM SENSOR".)

Brown (refer to "ALARM OUTPUT".)

White

Dome light   Fuse holder

Factory Door Switch
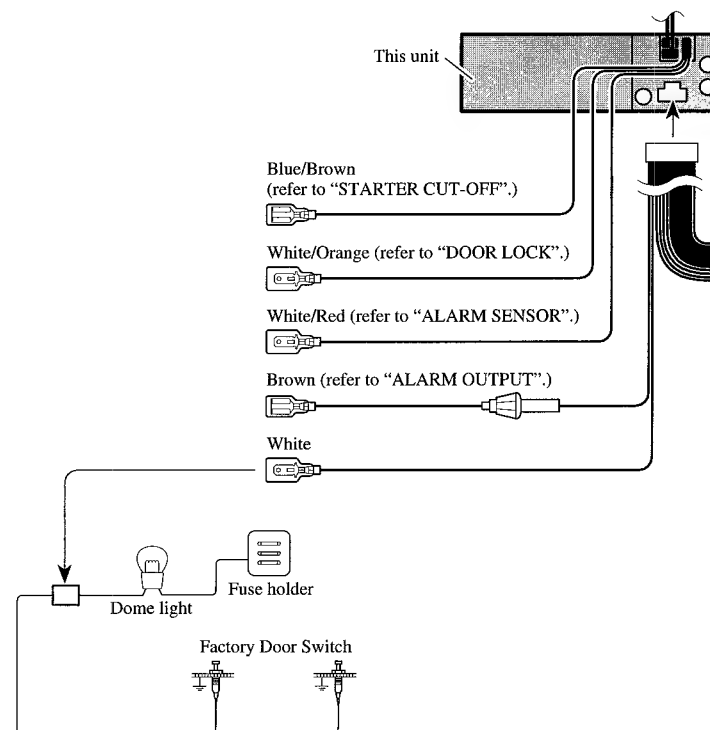
Fig. 31

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79

■ Positive (Non-grounding) Type Switch:

Ford, Jaguar, Mercedes

Note:
• Set DFS Alarm to recognize positive trigger from DFS Alarm Setting Menu. Set Door System to "DR-H :CLS".

This unit

Blue/Brown
(refer to "STARTER CUT-OFF".)

White/Orange (refer to "DOOR LOCK".)

White/Red (refer to "ALARM SENSOR".)

Brown (refer to "ALARM OUTPUT".)

White

Dome light

Factory Door Switch

Fuse holder
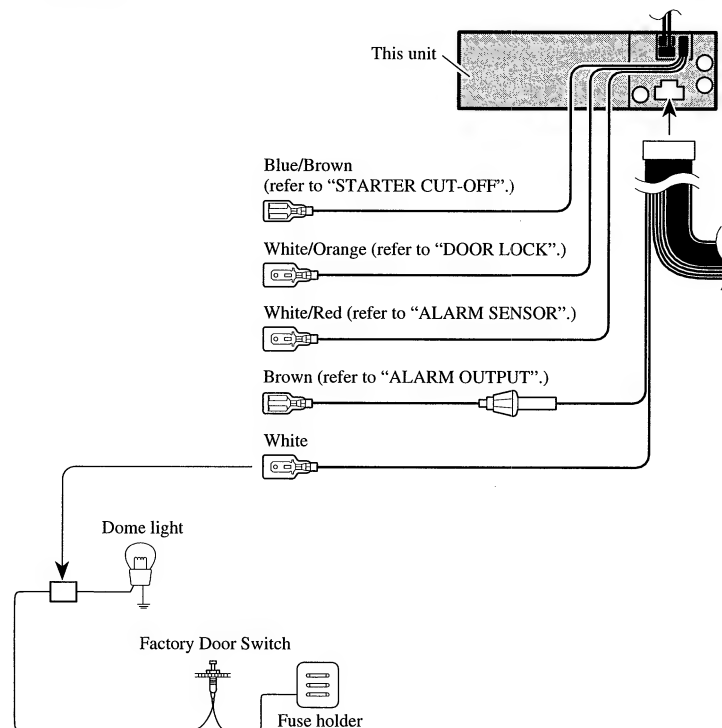
Fig. 32

■ Installing New Pin Switches

Separately sold pin switches are available that can be used to protect your vehicle's trunk, hood etc. When you purchase these, make sure that you first confirm that they can be used with your vehicle's door system type.
Follow the makers instructions as to installation and wiring.

ALARM OUTPUT (Brown)

The brown lead provides a +12 V, constant or pulsed output while alarm is sounding. This lead has a maximum current capability of 500 mA and can be used to trigger a relay to sound a siren, horn or flash lights.

■ Recommended Wiring:

30 amp relay (sold separately) required to operate siren, horn or lights.
• Connect Brown wire to one side of relay coil.
• Connect ground to other side of coil.

For sirens, horns or lights requiring +12 V trigger
• Connect normally open to fused, constant +12 V source.

For horns or lights requiring ground trigger
• Connect normally open pin to ground.

This unit

Blue/Brown
(refer to "STARTER CUT-OFF".)

White/Orange (refer to "DOOR LOCK".)

White/Red (refer to "ALARM SENSOR".)

Brown

White (refer to "DOOR SWITCH".)

RELAY
(Sold separately)

30A Fuse
(Sold separately)

CONTROL

30A

BATT

GND

OUTPUT

Car battery

Horn/Siren etc.
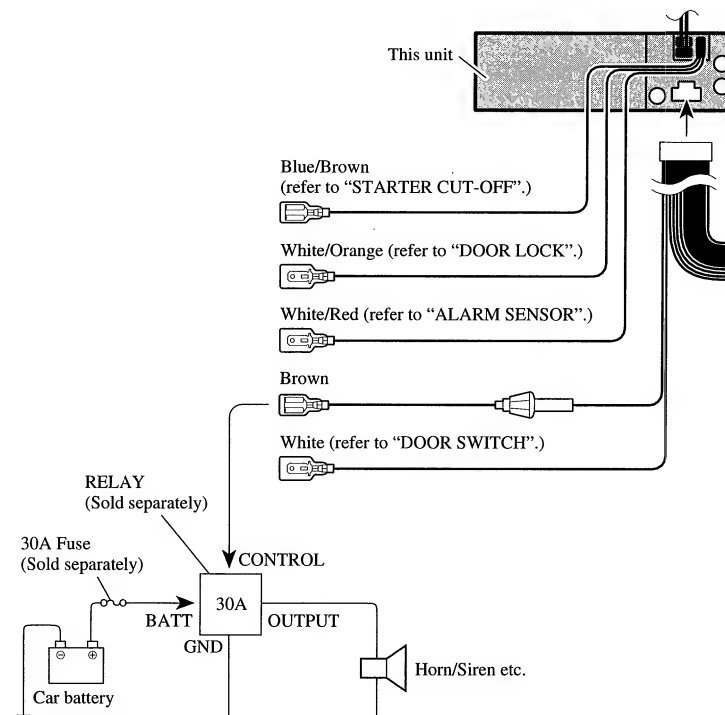
Fig. 33

ALARM SENSOR (White/Red)

The white/red lead is a negative triggered (Grounding) input that can be connected to various separately sold shock or glass sensors. There is no limit as to how many sensors are connected, so you can ensure total protection of your vehicle. Follow the makers instructions as to installation and wiring.

Note:
• If the shock sensor detects vehicle vibrations, use the negative (–) output type. If you use the positive (+) output type, the alarm will sound continually, and the shock sensor will not operate correctly.

This unit

Blue/Brown
(refer to "STARTER CUT-OFF".)

White/Orange (refer to "DOOR LOCK".)

White/Red

Brown (refer to "ALARM OUTPUT".)

White (refer to "DOOR SWITCH".)

Glass Sensor

Shock Sensor
(Ensure proper sensitivity adjustment in
accordance with maker's instructions.)
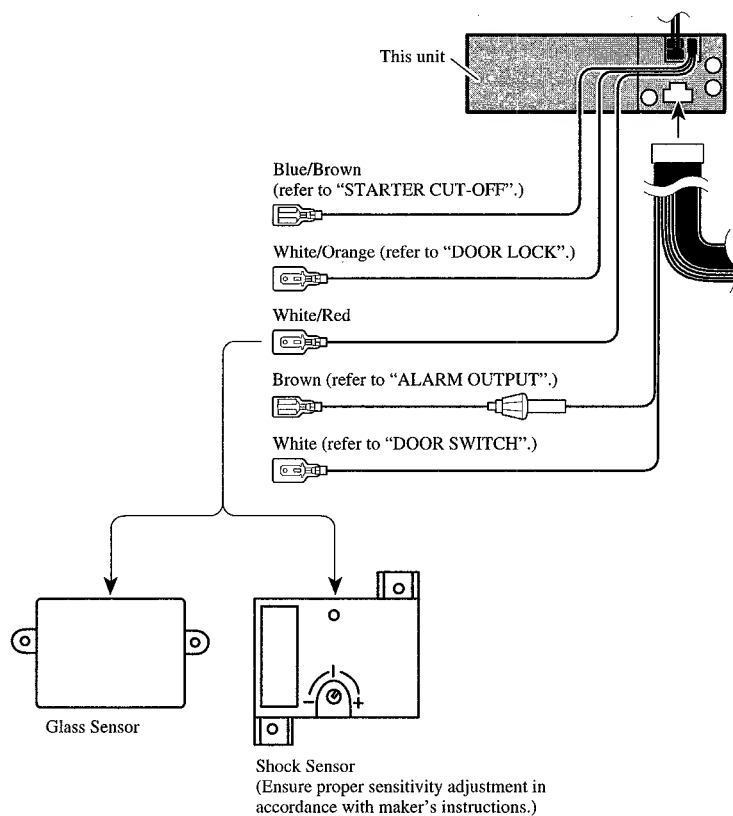
Fig. 34

DOOR LOCK (White/Orange)

The white/orange lead should be connected to the "unlock" lead for your vehicles door locking system, so that when you open the driver's door by your vehicle's remote control, your Pioneer DFS Alarm is deactivated.

First, locate the two wires from the lock/unlock switch that operate the factory door lock solenoids for the driver's side. Using a meter, determine which lead is used to unlock the door; connect this to the white/orange lead of your Pioneer Car Stereo. In the DFS Alarm Setting Menu, select the door-lock system type according to your vehicle (grounding or non-grounding).

If you have difficulty wiring this connection, please consult your nearest Installation specialist.

Note:
• If your vehicle is equipped with a central door lock but the glass or shock sensor is not connected, if the window is broken and the central door lock is released, this unit's DFS Alarm will not operate.
• Pioneer recommends that both a shock sensor and glass sensor be installed when you are using the "Remote Disarming" feature.

This unit

Blue/Brown
(refer to "STARTER CUT-OFF".)

White/Orange

White/Red (refer to "ALARM SENSOR".)

Brown (refer to "ALARM OUTPUT".)

White (refer to "DOOR SWITCH".)

Unlock

Lock/Unlock
Switch   Lock   Switching
                           Relays   Lock Solenoid

Fig. 35

DEH-68,635,58,535,53

81
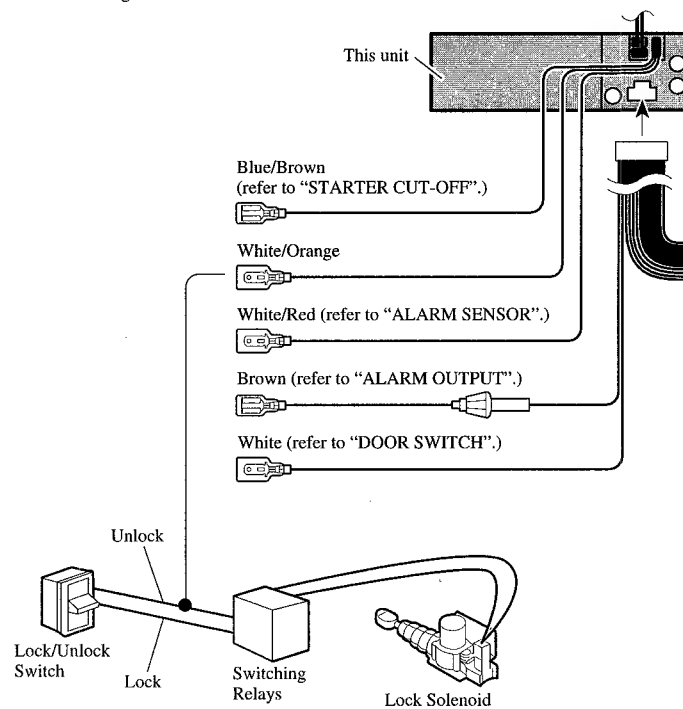
DFS Alarm Installation

STARTER CUT-OFF (Blue/Brown)

The blue/brown lead will provide a continuous +12 V output while alarm is sounding and for 30 minutes after initial trigger, up to 5 consecutive triggers. This lead has a maximum current capability of 500 mA and can be used to trigger a relay to disable the starter.

Note:
• In order for the "DFS Alarm" to operate when a window is broken, connect this unit's White/Red (ALARM SENSOR) lead to glass sensor securely.
• In order for the "DFS Alarm" to operate when a door is forced open, connect this unit's White (DOOR SWITCH) lead securely.

■ **Recommended Wiring:**

30 amp relay (sold separately) required to disable starter.
• Connect blue/brown lead to one side of relay coil.
• Connect other side of coil to ground.
• Locate starter wire under dash, near steering column.
• Cut starter wire and try to start vehicle to verify wire is correct.
• Connect key side of cut wire to normally closed pin.
• Connect starter side of cut wire to common pin.
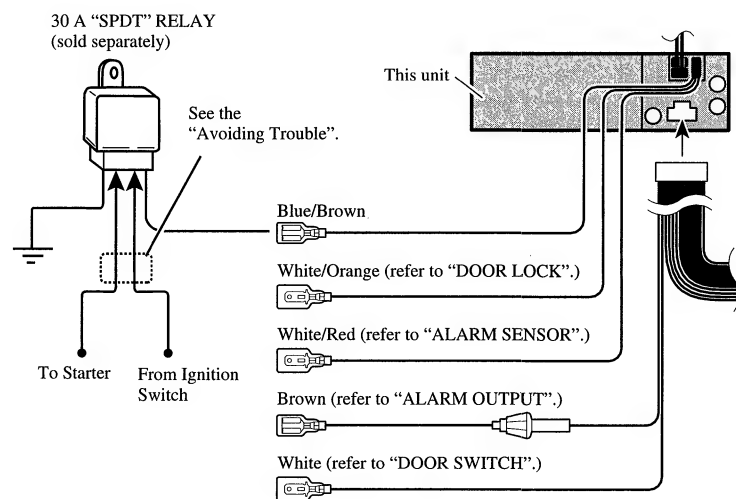
Fig. 36

Avoiding Trouble

You may not be able to start the engine even if you operate the unit correctly. Take the following measures to deal with this problem. When installing a switch to deal with such a problem, install it where it is least conspicuous.
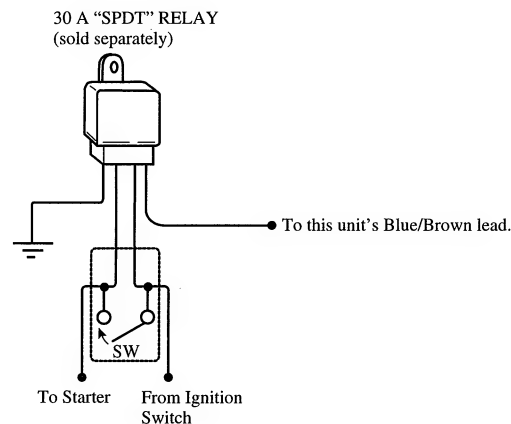
Fig. 37

Note:
• Use cords and switches having current handling (amperage) capacity greater than that of the relay to be attached.

Key Finder

■ Head Unit

Disc loading slot   EJECT button

FUNCTION button   F.SEEK button

▲/▼/◄/► buttons

APF button

PGM button

SOURCE button

+/– button   Buttons 1 – 6   DETACH button

BAND button   DISP button

AUDIO button

■ Remote Controller

+/– button

FUNCTION button   AUDIO button

▲/▼/◄/► buttons

BAND button   PGM button

CD button   TUNER button

PAUSE button   ATT button
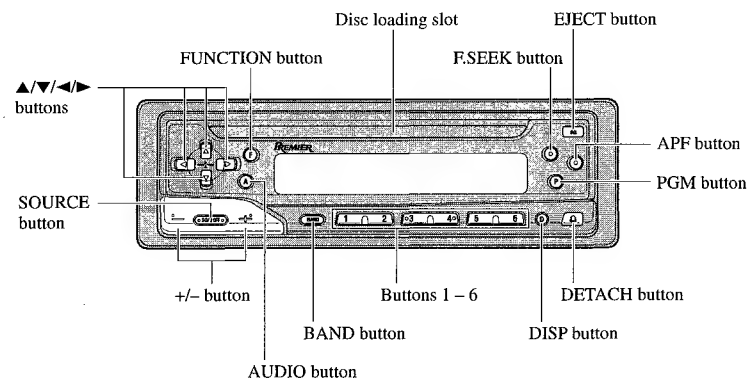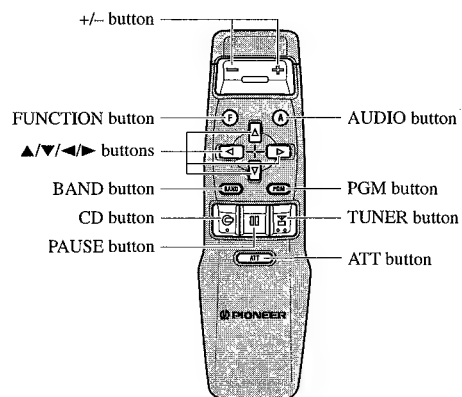
Remote Controller and Care

Using the Remote Controller

This product is equipped with a remote controller for convenient operation.
- Point the controller in the direction of the front panel to operate.
- When the controller is not in use, attach it firmly to the provided mounting base.

Precaution:
- Do not store the remote controller in high temperatures or direct sunlight.
- The controller may not function properly in direct sunlight.
- Do not let the remote controller fall onto the floor, where it may become jammed under the brake or accelerator pedal.
- Open the cover on the rear of the remote control, and you'll find a switch. Do not change this switch's position from the MAIN UNIT position. (Initially, the switch is set to the MAIN UNIT position.) If you change the switch setting, correct operation of this unit will not be possible.
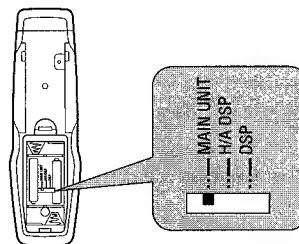
Batteries

- **Remove the cover on the back of the remote controller and insert the batteries with the (+) and (–) poles pointing in the proper direction.**
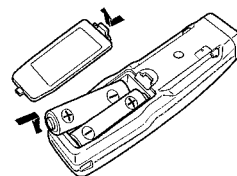
Precaution:
- Use only AAA or IEC R03 1.5 V batteries.
- Remove the batteries if the remote controller is not used for a month or longer.
- Do not attempt to recharge the supplied batteries.
- Do not mix new and used batteries.
- If the event of battery leakage, wipe the remote controller completely clean and install new batteries.

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Basic Operation

Switching Power ON/OFF

- **Select the desired source (such as the tuner).**
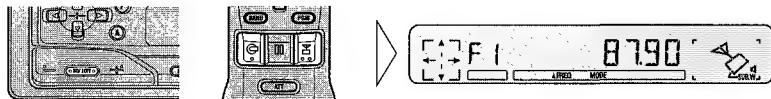
■ Head Unit

Each press of the SOURCE button selects the desired source in the following order:
Built-in CD player → Tuner

To switch the sources OFF, hold down the SOURCE button for 1 second or more.

■ Remote Controller

Each press of the CD button selects the desired source in the following order:
Built-in CD player → Sources OFF

Each press of the TUNER button selects the desired source in the following order:
Tuner → Sources OFF

Note:
- The sound source will not change if no disc is set in this unit.

Tuner Operation

Basic Operation of Tuner

1. Select Tuner.

Each press changes
the source ...

2. Select the desired band.

F1 → F2 → F3 → AM

3. Tune the receiver to a higher or lower frequency.
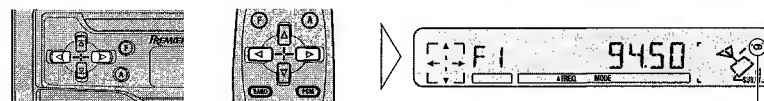
"⊃" stereo

This product's tuner lets you select the tuning by changing the length of the time you press the button.

Manual Tuning (step by step)	0.3 seconds or less
Seek Tuning (automatically)	0.3 – 2 seconds
Manual Tuning (continuously)	2 seconds or more

Note:
- "⊃" stereo indicator lights when a stereo station is selected.

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4. Raise or lower the volume.

$\Box F I \quad VOL \quad I2$
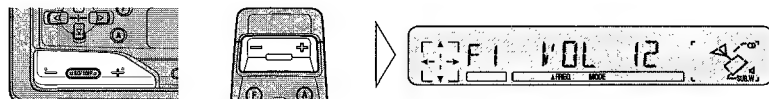
5. Turn the source OFF.
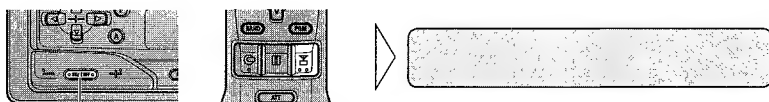
Hold for 1 second

Entering the Function Menu

In this menu you can select tuner functions.

* **Select the desired mode in Function Menu.**
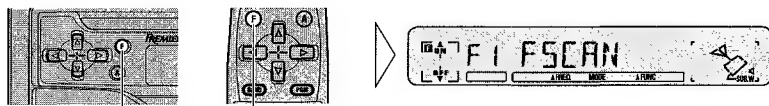
$\Box F I \quad FSCAN$

Each press changes   Each press changes
the mode ...   the mode ...

Each press of the FUNCTION button selects the mode in the following order:
FSCAN → FBSM → APF → MULTI-ST → LOC → SEEK SEL

To cancel the Function Menu, press the BAND button.

Note:
* **In modes other than LOC, you can use ID LOGIC functions. Refer to "Using ID LOGIC" for details and instructions on how to use these functions.**
* After entering the Function Menu, if you do not perform an operation within about 30 seconds, the Function Menu is automatically canceled.

Tuner Operation

Local Seek Tuning

This mode selects only stations with especially strong signals.

1. Select the Local mode (LOC) in the Function Menu.

2. Switch the Local mode ON or OFF.

$F I \quad LOC \quad ON$

"LOC"
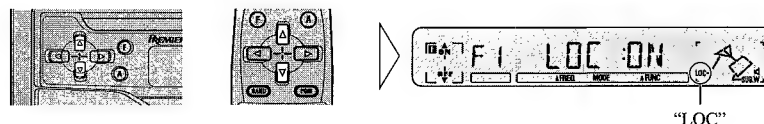
To cancel the Function Menu, press the BAND button.

Preset Tuning

Up to 18 FM stations (6 in F1 (FM1), F2 (FM2) and F3 (FM3)) and 6 AM stations can be stored in memory.
Store the stations in memory under buttons 1 – 6 beforehand with the Preset Memory function.

Preset Memory

1. Select the station whose frequency you want to store in memory.

2. Press one of buttons 1 – 6 for 2 seconds or longer to store the desired stations. (eg. Press button 4.)

$F \quad 4 \quad 9450$
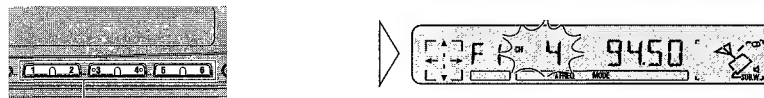
Hold for 2 seconds

The station is stored in memory under the selected button.

Recalling Preset Stations

There are two ways to recall preset stations.

■ Direct Recall

- **Press one of buttons 1 – 6 to recall a station preset under that button. (eg. Press button 4.)**

■ Sequential Recall

- **Recall a station preset under button 1 – 6.**
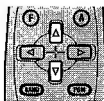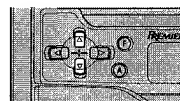
This unit features a tuner with ID LOGIC functions.
ID LOGIC is a database of information about AM and FM stations throughout the United States and in some parts of Canada and Mexico. To enable you to take advantage of this information, this unit features a wide range of functions.
You get display of Broadcast Station Call Sign and Format (Program type), tuning to stations broadcasting a desired format.

Note:
- Sections 1 and 2 provide explanations concerning menus for ID LOGIC operations. Sections 3 to 7 explain basic operations, and Sections 8 to 11 deal with special functions.
- Before using ID LOGIC functions, you must first perform Location Set-up. (Refer to Section 3.)

1. Entering the Function Menu

In this menu you can select ID LOGIC functions.

- **Select the desired mode in Function Menu.**
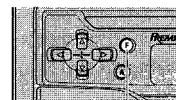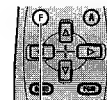
Each press changes   Each press changes
the mode ...   the mode ...

Each press of the FUNCTION button selects the mode in the following order:
FSCAN → FBSM → APF → MULTI-ST → LOC → SEEK SEL

To cancel the Function Menu, press the BAND button.

Note:
- LOC is a normal tuner function. For an explanation on this function and how to use it, refer to "Local Seek Tuning" on page 11.
- After entering the Function Menu, if you do not perform an operation within about 30 seconds, the Function Menu is automatically canceled.

2. Entering the Detailed Setting Menu

In this menu you can perform Location Set-Up, Update and Programmable button settings.

1. Enter the Detailed Setting Menu.
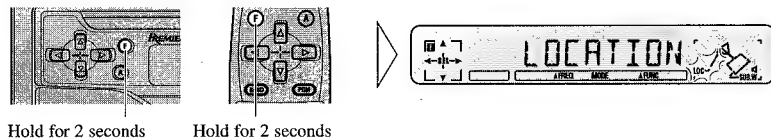
Hold for 2 seconds   Hold for 2 seconds

2. Select the desired mode.

Each press changes the mode ...   Each press changes the mode ...
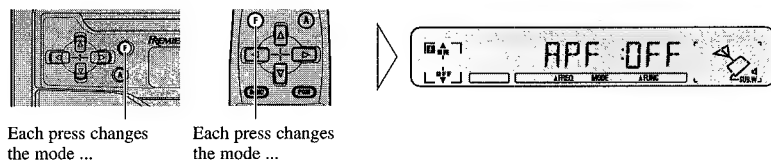
Each press of the FUNCTION button selects the mode in the following order:
LOCATION → APF → UPDATE → PGM-FUNC

To cancel the Detailed Setting Menu, press the BAND button.

Note:
• You can cancel the Detailed Setting Menu by pressing the FUNCTION button again for 2 seconds or more.

3. Location Set-Up

Set the name of the country, state and city (nearest city to the vehicle position) that the vehicle is positioned in.

1. During FM reception, select the Location Set-Up mode (LOCATION) from the Detailed Setting Menu.

2. Select the country.
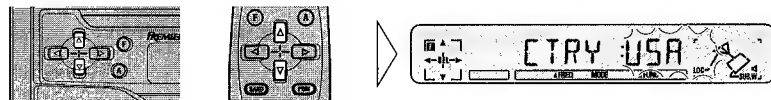
Continued overleaf.

Using ID LOGIC

3. Advance to next selection.
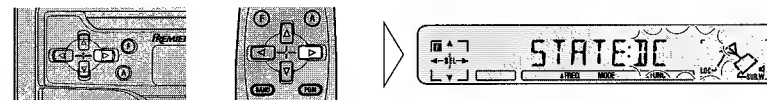
4. Select the state.
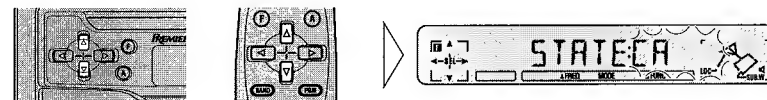
States are stored alphabetically.

5. Advance to next selection.
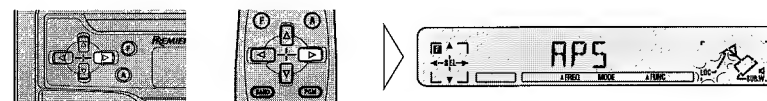
6. Using the APS (Auto Position Setting) function, automatically set the city the vehicle is located in.

When you have completed APS, the city name flashes in the display.

When you have correctly set the city name, perform procedure 10 to cancel the Location Set-Up mode.
If you have not correctly set the city name, perform procedure 7 to set the name manually.

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7. Manually set the city.
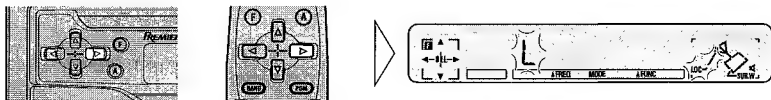
The initial letters of city names are displayed for city name selection.

8. Select the initial of the city name.
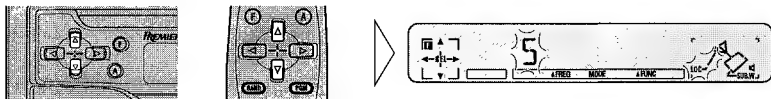
9. Fix your choice of the initial.
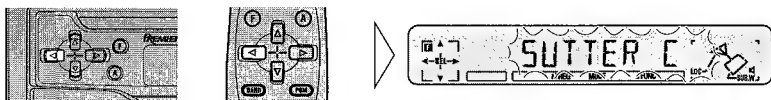
One city having your selected initial letter will be displayed.

10. Select the city.
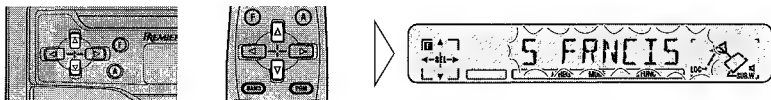
Cities are stored alphabetically.

11. When the correct city has been selected, cancel the Location Set-Up mode.
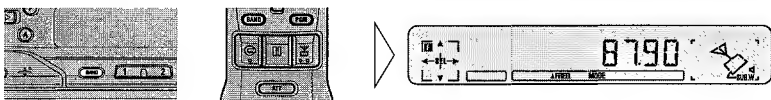
4. Format Tuning

This product allows you to look for a station by format (program type).
Formats are divided into 8 types, such as ROCK, COUNTRY, NEWS and TALK.

Group Formats	Corresponding Formats
ROCK	TOP 40
	CLS ROCK
	ROCK
RASY LIS	SOFT
	ADLT HIT
	OLDIES
CLS/JAZZ	CLASSICL
	JAZZ
	NOSTLGIA
	PUBLIC
COUNTRY	COUNTRY
R AND B	R AND B
	SOFT R/B
INFO	NEWS
RELIGION	REL MUSC
	REL TALK
MISC	LANGUAGE
	MISC

1. Select Format Seek mode.
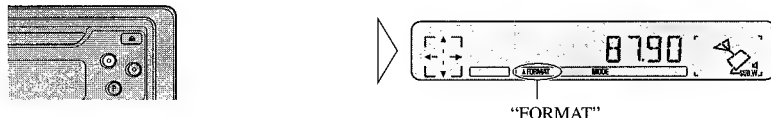
"FORMAT"

To cancel Format Seek mode, repeat the preceding operation.

2. Select a group format.
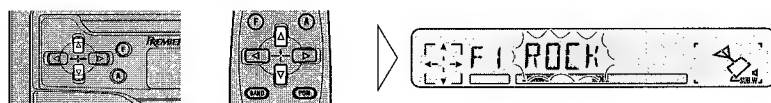
A station broadcasting a program with a different group format from the format of the currently received broadcast station is selected.

Press the ▲ button to select stations with the next group format, and the ▼ button to select stations with the preceding group format.

3. Select a station.
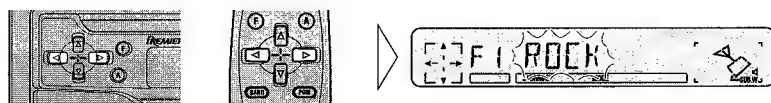
A station broadcasting a program with the same group format as the currently received broadcast station is selected.

Press the ▶ button to select a station with a higher frequency and the ◄ button to select a station with a lower frequency.

Note:
- If you perform operation 3 during reception of a broadcast station with no format data, "NO FRMT" is displayed.
  The tuner then returns to the prior frequency.
- "NO STATN" is displayed if no station with the selected group format can be received.
  The tuner then returns to the prior frequency.
- "NO DATA" will be displayed if there is no station data for the specified group format stored in the ID LOGIC database.
- If the set vehicle location is different from the current location, the selected group format and the format of the program may differ.
- If "MS" is displayed, refer to the "8. Multi-Station" section.
- You can also select and cancel the Format Seek mode when in the Function Menu SEEK SEL mode.

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5. F.BSM (Format Best Stations Memory)

This function automatically places receivable stations into presets 1 – 6, in order from strongest to weakest, for a selected group format.

Firstly, choose your desired group format as described in "4. Format Tuning".

1. Select the F.BSM mode (FBSM) in the Function Menu.

2. Start F.BSM.
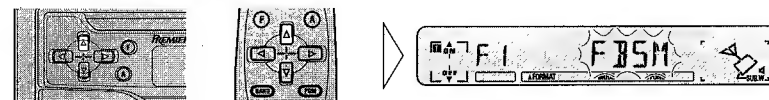
To cancel F.BSM midway, press the ▼ button.

When F.BSM is completed, "FBSM" in the display stops flashing.

3. Select a preset station by pressing a button 1 – 6. (eg. Press button 4.)
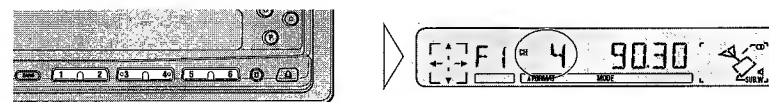
Note:
- In areas where there are not 6 or more stations covered by format tuning, the previously stored contents may be retained.
- If "MS" is displayed, refer to the "8. Multi-Station" section.

6. F.SCAN (Format Scan)

This function allows you to scan receivable stations with the same format type as that of the present station that you are listening to.

1. Select the F.SCAN mode (FSCAN) in the Function Menu.

2. Start F.SCAN.
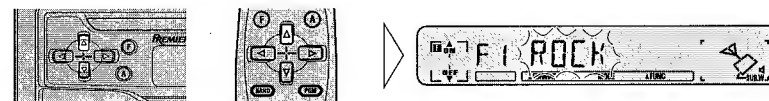
Stations with the same format are tuned one after another at 8 second intervals.

3. Cancel the scan function and enable you to remain tuned to the present station.

If the Function Menu has been canceled automatically, select the F.SCAN mode in the Function Menu again.
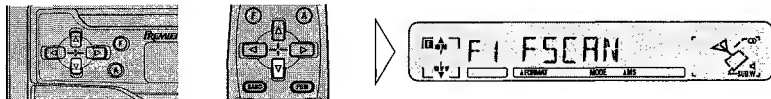
To cancel the Function Menu, press the BAND button.

Note:
• If "MS" is displayed, refer to the "8. Multi-Station" section.

7. Display Modes

This function can be used to scroll through the various display modes for Band/Frequency, Call Sign/Frequency and Call Sign/Format.

• **By pressing DISP button it is possible to scroll through the various displays.**
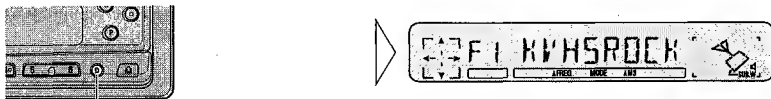
Each press changes
the display ...

Note:
• You cannot switch to these displays if Call Sign and Format data for the station you are receiving are not stored in the tuner.
• If the set vehicle position is different from the current location, a different Format and Call Sign from those of the tuned-in station may be displayed.
• The program of some stations may differ from that indicated by their Format.

8. Multi-Station

When "MS" is displayed, this indicates there are a number of stations having the same broadcasting frequency stored in the ID Logic database.

For example, if you have performed Format Tuning; you may be listening to a station with a different format type than which you chose.

"MS"

• **Display Call Sign and Format indications, and confirm that Call Sign and Format agree with those of the program being broadcast.**

Note:
• If the format of the program differs from the format you want to listen to, perform Format Tuning, F.BSM or F.SCAN again.
• If the Call Sign and Format do not agree with those of the program, display indications change.

■ **Changing Multi-Station Call Sign and Format**

1. Select the Multi-Station mode (MULTI-ST) in the Function Menu.

2. Select Call Sign and Format.
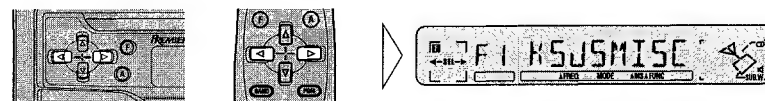
Pressing the button switches the Call Sign and Format of the station broadcasting on the frequency currently being received. Select the appropriate Call Sign and Format for the broadcast.

To cancel the Function Menu, press the BAND button.

9. APF (Auto Position Follow)

■ When the source is the tuner

When you drive away from the city vicinity to which the vehicles location has been set to, the quality of the received station broadcast will deteriorate. Before searching for a new station, you must first update your vehicle's position.

• **Start APF.**
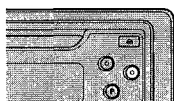
Note:
• You can also start APF in the Function Menu.

■ When the source is the built-in CD player

Your vehicle's position can be automatically updated at regular intervals when listening to the built-in CD player; if APF has been turned on.

1. **Select the APF ON/OFF mode (APF :OFF) in the Detailed Setting Menu.**

2. **Switch APF ON or OFF.**
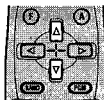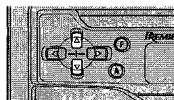
To cancel the Detailed Setting Menu, press the BAND button.

Using ID LOGIC

10. Update

This function is provided for amendment, deletion and addition of data (call sign and format) relating to stations registered in the ID Logic database.

Note:
• Updated data is not cleared even if you disconnect the vehicle's battery or if you press the RESET button. Clear updated data in the CLEAR mode. (Refer to page 94).

■ Amending and deleting data

If the call sign or format for a station changes, then the data registered in the ID Logic database should be changed.

Also if a station has closed down, you should delete that data from the database.

Database amendments and deletions can be performed for a total of 161 stations.

1. **Set the frequency to that of the station, whose data you want to amend or delete.**

2. **To amend or delete data for a station that cannot be received from the vehicles present location, refer to "3. Location Set-Up" to manually set the vehicles position to a city, where that station can be received.**

3. **When "MS" is lit, coordinate the broadcast content and the display.**
   (Refer to "8. Multi-Station" section.)

4. **Select the Update mode (UPDATE) in the Detailed Setting Menu.**

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5. Select the EDIT mode.
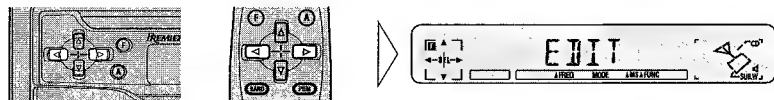
Mode switches between EDIT/ADD/CLEAR each time you press the button.

6. Enter EDIT mode.
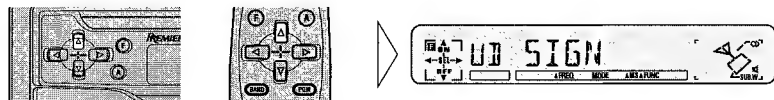
The Call Sign is displayed.

Note:
• If you try to make data amendments or deletions for more than 161 stations, "EDT FULL" will be displayed.

7. Select the character to be amended.
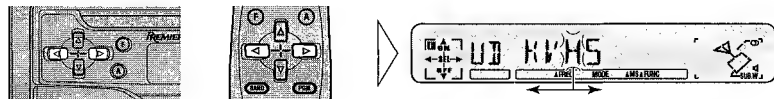
8. Select a different character.
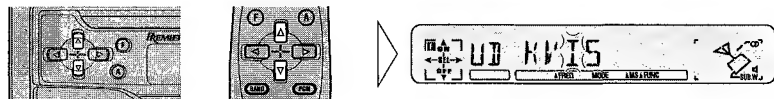
Note:
• To delete data, use a blank for all four characters.

9. If you press the ► button when the last of the four call sign characters is flashing, the format type is displayed.
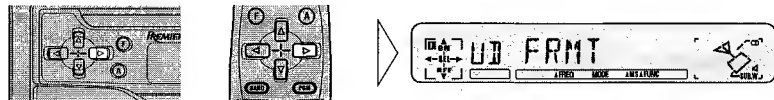
Continued overleaf.

10. Select format type.
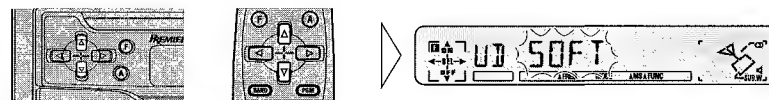
Each time you press the button, the format type changes as follows:
TOP 40/CLS ROCK/ROCK/SOFT/ADLT HIT/OLDIES/CLASSICL/
JAZZ/NOSTLGIA/PUBLIC/COUNTRY/R AND B/SOFT R/B/
NEWS/REL MUSC/REL TALK/LANGUAGE/MISC

11. Press the ► button after completing format type selection.

A registration confirmation message is displayed.

12. Registering amended/deleted data in the ID Logic database.
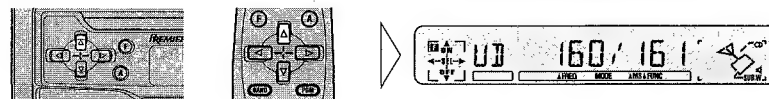
The remaining space for amendments/deletions is displayed for a short while.

Note:
• To cancel the EDIT mode without registering amended/deleted data, press the ▼ button.

13. Cancel the update mode.
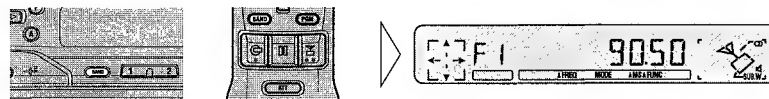
■ Registering New Data

A newly opened station, or a station whose data is not registered in the ID Logic database, may be manually registered.

New data registration can be performed up to 63 times.

1. Follow steps 1 – 4 of "Amending and deleting data".

2. Select the ADD mode.
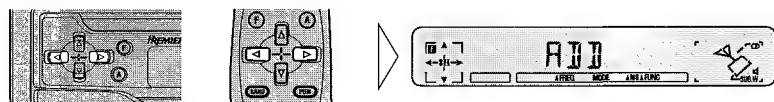
Mode switches between EDIT/ADD/CLEAR each time you press the button.

3. Enter ADD mode.

Call sign "AAAA" is displayed.

Note:
• If you try to add data for more than 63 stations "ADD FULL" will be displayed.

4. Follow steps 7 – 10 of "Amending and deleting data", to enter your desired data.

5. Press the ▶ button after completing format type selection.
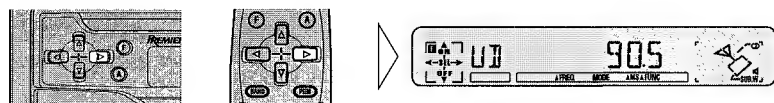
The frequency is displayed.

Continued overleaf.

6. Select frequency.
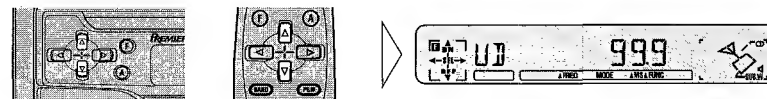
7. Press the ▶ button after completing frequency selection.
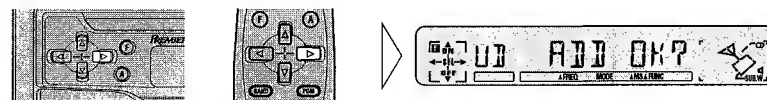
A registration confirmation message is displayed.

8. Register additional new data in the ID Logic database.
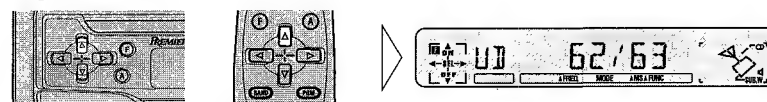
The remaining space for additions is displayed for a short while.

Note:
• To cancel the ADD mode without registering additional data, press the ▼ button.

9. Cancel the Update mode.

Note:
• Data items registered in the ADD mode can be amended/deleted individually. (Refer to "Amending and deleting data".)

■ Clearing amended, deleted, and additional data

You can clear amended, deleted and additional data from the ID Logic database.

1. Select the Update mode (UPDATE) in the Detailed Setting Menu.

2. Select the CLEAR mode.
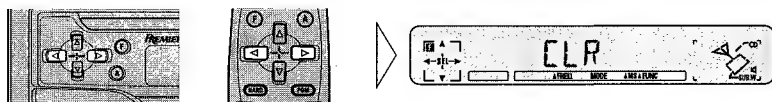
Mode switches between EDIT/ADD/CLEAR each time you press the button.

3. Enter CLEAR mode.
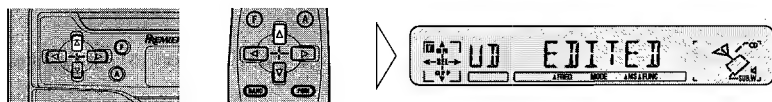
4. Select the data you want to clear.

Display switches between EDITED/ADDED/ALL each time you press the button.
To clear amended/deleted data, select "EDITED". To clear additional data, select "ADDED". To clear both amended/deleted and additional data, select "ALL".
(In this example, "EDITED" is selected.)

Continued overleaf.
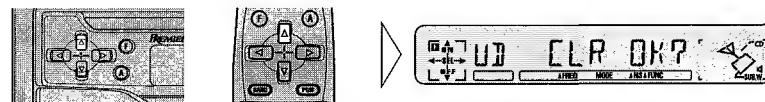
5. Press the ▲ button.

A clear confirmation is displayed.

6. Clear data.
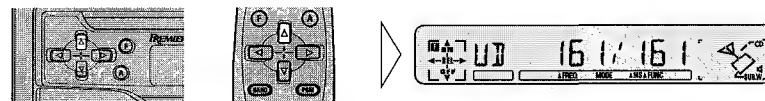
The remaining spacce for amendments/deletions (or additions) is displayed for a short while.

Note:
• Press the ▼ button to cancel the CLEAR mode without clearing data.

7. Cancel the update mode.

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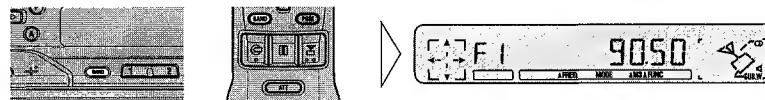
11. Using the PGM (Programmable) Button

You can memorize Function Menu F.BSM (FBSM), F.SCAN (FSCAN), and Multi-Station (M-ST) functions in the Programmable button.
Initially, the FBSM function is memorized in the Programmable button.
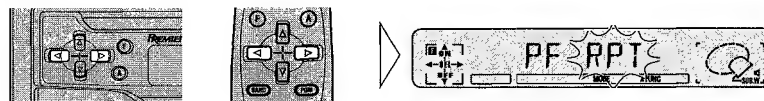
■ Setting the Programmable Button

1. **Select the Programmable button setting mode (PGM-FUNC) in the Detailed Setting Menu.**

2. **Select the function you want to memorize in the Programmable button.**
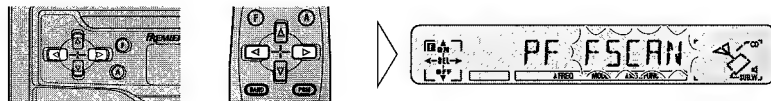
3. **Memorize the function in the Programmable button.**
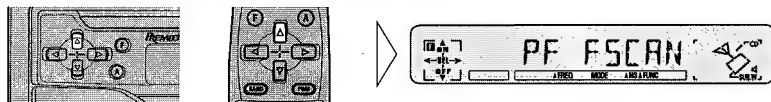
To cancel the Detailed Setting Menu, press the BAND button.

■ Using the Programmable Button

The Programmable button operates in a different way depending on the function programmed (memorized).

• **Use the programmable button.**
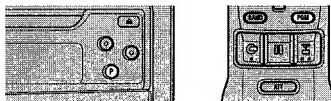
Function	Press	Hold for 2 seconds
FBSM	OFF	ON
FSCAN	ON/OFF	———
M-ST	Select	———

Basic Operation of Built-in CD Player

The built-in CD player plays one standard 12 cm or 8 cm (single) CD at a time. Do not use an adapter when playing 8 cm CD.

1. **Insert the disc with the recorded (iridescent) surface down.**
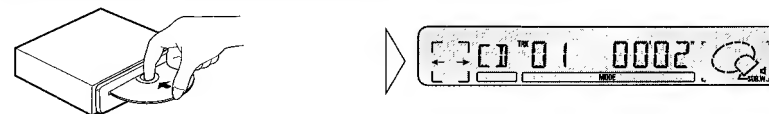
2. **Select the desired track (and phrase).**
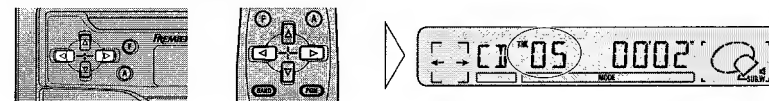
This product's built-in CD player lets you select the Track Search function or Fast-forward/Reverse function by changing the length of the time you press the button.

Track Search	0.5 seconds or less
Fast-forward/Reverse	Continue pressing

3. **Raise or lower the volume.**

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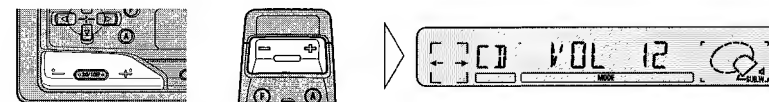
4. Remove the disc.
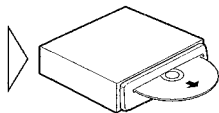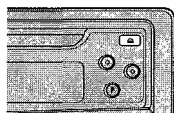
Note:
- The CD function can be turned ON/OFF with the disc remaining in this product. (See page 84.)
- Discs left partially inserted after ejection may incur damage or fall out.
- If a disc cannot be inserted fully or playback fails, make sure the recorded side is down, push the EJECT button and check the disc for damage before reinserting it.
- If a CD is inserted with the recorded side up, it will be ejected automatically after a few moments.
- If the built-in CD player cannot operate properly, an error message (such as "ERROR-14") appears on the display. Refer to "Built-in CD Player Troubleshooting" on page 98.

Pause

- **Stop playback temporarily or restarts the system.**
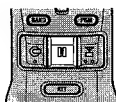
Note:
- You can also switch the Pause function ON/OFF in the Function Menu.

Using the Built-in CD Player

Entering the Function Menu

In this menu you can select built-in CD player functions.

- **Select the desired mode in Function Menu.**
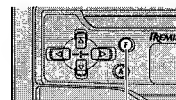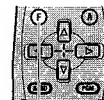
Each press changes the mode ...   Each press changes the mode ...

Each press of the FUNCTION button selects the mode in the following order:

RPT → RDM → SCAN → PAUSE

To cancel the Function Menu, press the BAND button.

Note:
- After entering the Function Menu, if you do not perform an operation within about 30 seconds, the Function Menu is automatically canceled.

Repeat Play

Repeat Play plays the same track repeatedly.

1. **Select the Repeat mode (RPT) in the Function Menu.**

2. **Switch the Repeat Play ON or OFF.**
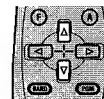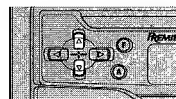
To cancel the Function Menu, press the BAND button.

Note:
- If you perform Track Search or Fast-forward/Reverse, Repeat Play is automatically canceled.

Random Play

Random Play plays the tracks on a CD in random order for variety.

1. Select the Random mode (RDM) in the Function Menu.

2. Switch the Random Play ON or OFF.
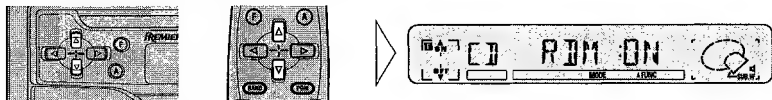
To cancel the Function Menu, press the BAND button.

Note:
• Since playback is random, the same track may be repeated consecutively.

Scan Play

Scan Play plays the first 10 seconds or so of each track on a CD in succession.

1. Select the Scan mode (SCAN) in the Function Menu.

2. Switch the Scan Play ON.
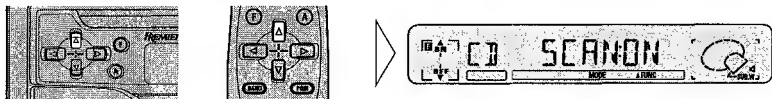
3. When you hear the track you are looking for, cancel Scan Play.

If the Function Menu is automatically canceled at this time, select the Scan mode in the Function Menu once more.
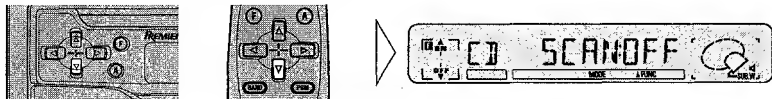
Playback of the current track continues.

To cancel the Function Menu, press the BAND button.

Note:
• Scan Play is canceled automatically after all the tracks on a disc have been scanned.

Using the PGM (Programmable) Button

In the Function Menu, you can memorize the Pause (PAUSE), Repeat (RPT), and Random (RDM) functions in the Programmable button. Initially, PAUSE is memorized in the Programmable button.

■ **Setting the Programmable Button**

1. Select the Programmable button setting mode (PGM-FUNC).
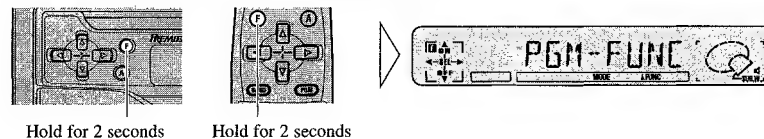
Hold for 2 seconds   Hold for 2 seconds

2. Select the function you want to memorize in the Programmable button.

3. Memorize the function in the Programmable button.
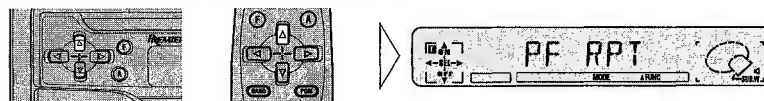
To cancel the Programmable button setting mode, press the BAND button.

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■ Using the Programmable Button

The Programmable button operates in a different way depending on the function programmed (memorized).

• Use the Programmable button.
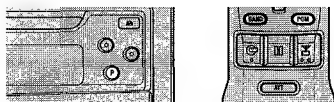
Function	Press	Hold for 2 seconds
PAUSE	ON/OFF	————
RPT	ON/OFF	————.
RDM	ON/OFF	—————

Built-in CD Player Troubleshooting

Error Message

When problems occur with CD playback, an error message appears on the display. Refer to the table below to identify the problem, then take the suggested corrective action. If the error persists, contact your dealer or your nearest PIONEER Service Center.

Message	Possible cause	Recommended action
ERROR- 11, 12, 17, 30	Dirty disc.	Clean the disc.
ERROR- 11, 12, 17, 30	Scratched disc.	Replace the disc.
ERROR- 14	Unrecorded CD.	Check the disc.
ERROR- 10, 11,12, 14, 17, 30, A0	Electrical or mechanical problem.	Turn the ignition ON and OFF, or switch to a different source, then back to the CD player.
HEAT	CD player overheating.	Discontinue play until the machine temperature drops.

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order:

roofer
t is ON.
in 30

Balance Adjustment

This function allows you to select a Fader/Balance setting that provides ideal listening conditions in all occupied seats.

1. **Select the Fader/Balance mode (FAD) in the Audio Menu.**

2. **Shift the balance progressively to the front or rear speakers.**
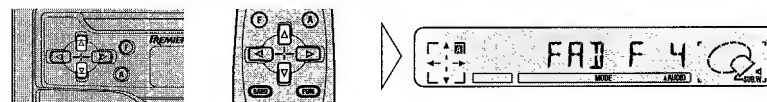
"FAD F15" – "FAD R15" is displayed as it moves from front to rear.

3. **Shift the balance to the left or right speaker, respectively.**
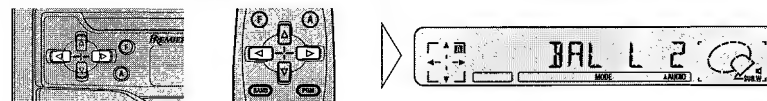
"BAL L 9" – "BAL R 9" is displayed as it moves from left to right.

To cancel the Audio Menu, press the BAND button.

Note:
- "FAD 0" is the proper setting when 2 speakers are in use.

Bass/Treble Adjustment

This product is equipped with two tone adjustment modes, the Bass (BAS) and Treble (TRE) modes.

1. **Select Bass mode (BAS) or Treble mode (TRE) in the Audio Menu.**

2. **Increase or decrease the intensity of the Bass or Treble, whichever is selected.**
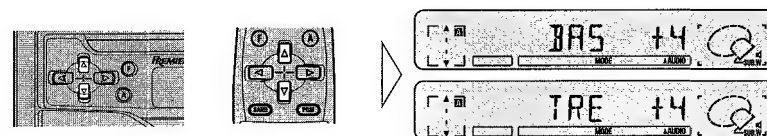
The display shows "+6" – "–6".

3. **Repeat steps 1 – 2 above for the other Bass or Treble adjustment.**

To cancel the Audio Menu, press the BAND button.

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Audio Adjustment

Loudness Adjustment

The Loudness function compensates for deficiencies in the low and high sound ranges at low volume.

1. **Select the Loudness mode (LOUD) in the Audio Menu.**

2. **Switch the Loudness function ON or OFF.**

"LOUD"
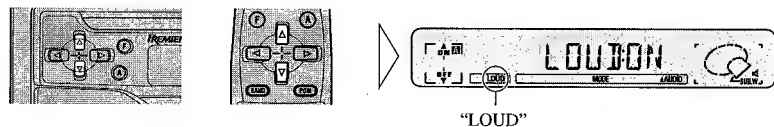
To cancel the Audio Menu, press the BAND button.

Sub-woofer Output

This product is equipped with a Sub-woofer output which can be switched ON or OFF. Initially, Sub-woofer output is ON.

1. **Select the Sub-woofer ON/OFF mode (SUB.W) in the Audio Menu.**

2. **Switch the Sub-woofer output ON or OFF.**
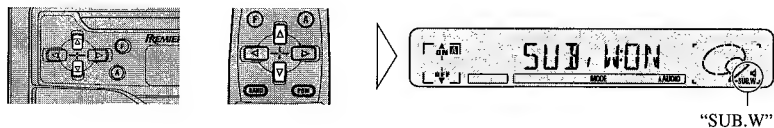
"SUB.W"

To cancel the Audio Menu, press the BAND button.

Note:
• Select the OFF setting when you do not want the Sub-woofer to operate.

Sub-woofer Setting Adjustment

When the Sub-woofer output is ON, you can adjust the cut-off frequency and the output level of Sub-woofer.

1. **Select the Sub-woofer setting mode (80HZ 0) in the Audio Menu.**

2. **Select the frequency to 50 Hz, 80 Hz or 125 Hz.**
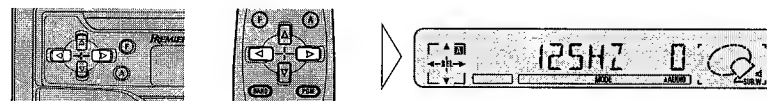
3. **Increase or decrease the output level.**
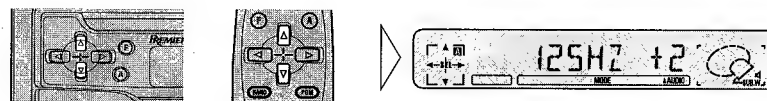
The display shows "+6" – "–6".

To cancel the Audio Menu, press the BAND button.

Note:
• You cannot select the 80HZ 0 mode (Sub-woofer setting mode) if Sub-woofer output is switched OFF in the SUB.W mode.

F.I.E. Function

The F.I.E. (Front Image Enhancer) function is a simple method of enhancing front imaging by cutting mid- and high-range frequency output from the rear speakers, limiting their output to low-range frequencies.

Precaution:
• When the F.I.E. function is deactivated, the rear speakers output sound in all frequencies, not only bass sounds. Reduce the volume before disengaging F.I.E. to prevent a sudden increase in volume.

1. Select the F.I.E. mode (FIE) in the Audio Menu.

2. Switch the F.I.E. function ON or OFF.

"FIE"
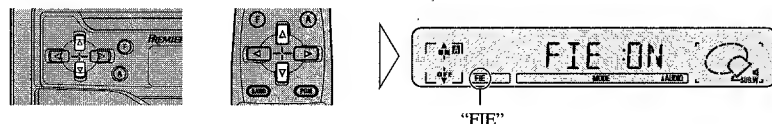
To cancel the Audio Menu, press the BAND button.

Note:
• After switching the F.I.E. function ON, select the FAD mode in the Audio Menu, and adjust front and rear speaker volume levels until they are balanced. (See page 99.)
• Switch the F.I.E. function OFF when using a 2-speaker system.

Volume Attenuator

The Attenuator reduces the volume instantly.

• **Cut the volume by about 90%.**

Repeat the preceding operation to return to previous volume.

Note:
• If the (+) or (−) buttons are used to cancel the Attenuator mode, the sound will resume at a lower volume than before.

Entering the Initial Setting Menu

With this menu, you can perform initial settings for the unit.

1. Switch the sources OFF.

2. Enter the Initial Setting Menu with the sources OFF.
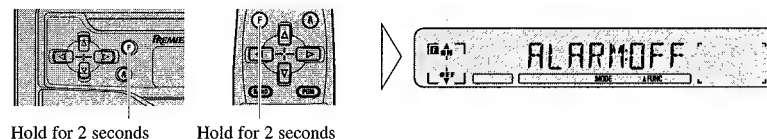
Hold for 2 seconds   Hold for 2 seconds

3. Select the desired mode.

Each press changes   Each press changes
the mode ...   the mode ...
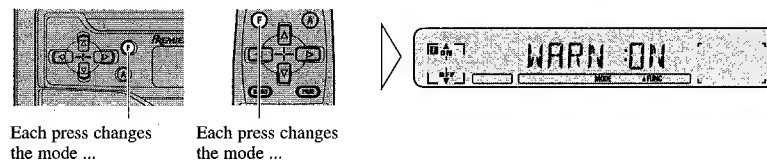
Each press of the FUNCTION button selects the mode in the following order:
ALARM → WARN → DIM

To cancel the Initial Setting Menu, press the BAND button.

Note:
• **ALARM is a new feature "Detachable Face Security Alarm". Refer to "DFS Alarm Function" for details and instructions on how to use this function.**
• Holding down the FUNCTION button for 2 seconds also cancels the Initial Setting Menu.

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Setting the Warning Tone

You can switch the Warning Tone function ON/OFF.

1. **Select the Warning Tone mode (WARN) in the Initial Setting Menu.**

2. **Switch the Warning Tone ON or OFF.**

> WARN OFF
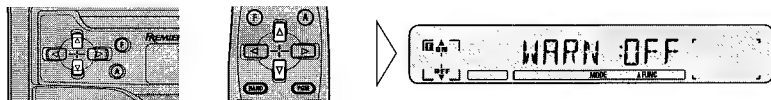
To cancel the Initial Setting Menu, press the BAND button.

Setting the Dimmer

To prevent this display becoming too bright at night, it is automatically dimmed when you switch on your vehicle's headlights. You can switch the dimmer ON/OFF.

1. **Select the Dimmer mode (DIM) in the Initial Setting Menu.**

2. **Switch the Dimmer ON or OFF.**

> DIM OFF
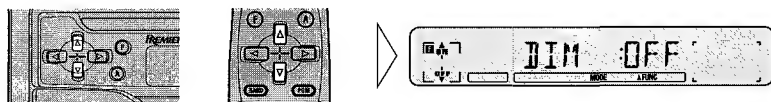
To cancel the Initial Setting Menu, press the BAND button.

DFS Alarm Function

In addition to the Detachable Face Security, Pioneer has incorporated a new feature **"Detachable Face Security Alarm"**. This feature is designed to protect your new Pioneer car stereo as well as your vehicle contents.

Activating the DFS Alarm Feature

Pioneer has developed a menu display that allows you to set-up your DFS Alarm to meet your personal needs. By scrolling through this menu it is possible to select your own "Entry Delay Time", "Speaker Output Volume", "Selectable Output", "Door System Type", "Starter Disable" and "Remote Disarm".
Initially from the factory the DFS Alarm feature is not activated.

1. **Select the DFS Alarm Feature ON/OFF mode with the sources OFF.**

> ALARMOFF
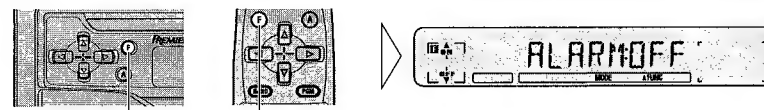
Hold for 2 seconds   Hold for 2 seconds

2. **Activate the DFS Alarm Feature.**

> ALARMON
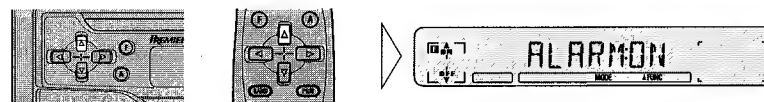
Press the ▼ button to deactivate the DFS Alarm Feature.

3. **Enter the DFS Alarm Setting Menu.**

> DELAY 15
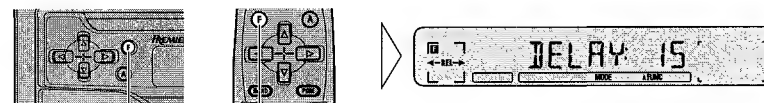
Hold for 2 seconds   Hold for 2 seconds

Setting Entry Delay Time

Initially the "Entry Delay Time" is set to 15 seconds. The "Entry Delay Time" can be adjusted to be 0, 5, 15, 30, 45 or 60 seconds.

1. Decrease or increase the "Entry Delay Time".
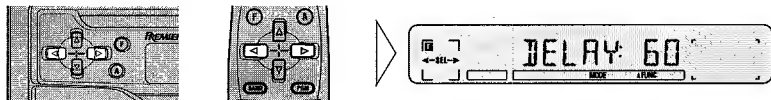
Display shows 0, 5, 15, 30, 45, or 60.

2. Advance to next selection.
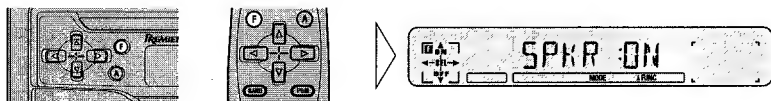
Activating Internal Speaker ON/ OFF

This feature allows you to select whether or not the speaker output is sounded when the "DFS Alarm" is triggered. Initially from the factory the speaker output is activated. Toggling between ▲, ▼ buttons allows you to deactivate or activate the "Internal Speaker". If you switch the speaker output OFF, you can not change the "TEST MODE".

■ Speaker Volume Output Adjustment

If the "Internal Speaker Output" has been selected then it is possible to adjust the volume of the speaker output for when the Alarm is triggered. To adjust the volume you must engage the "TEST MODE".

Note:
• If the "Internal Speaker Output" is turned OFF, then this menu will not appear.

1. Engage the "TEST MODE".
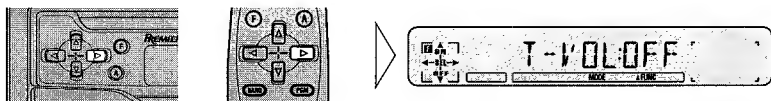
Continued overleaf.

DFS Alarm Function

2. Activate the "TEST MODE".
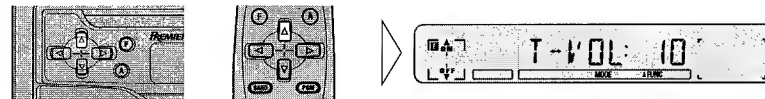
In this mode the speakers will sound.

3. Decrease or increase the volume.
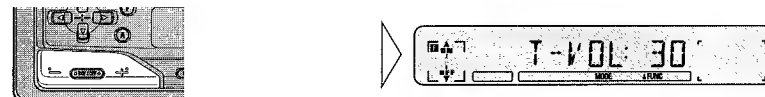
Display shows 10 – 30.

4. After selecting your preferred volume setting, deactivate the "TEST MODE".

5. Cancel the "TEST MODE".

6. Advance to next selection.
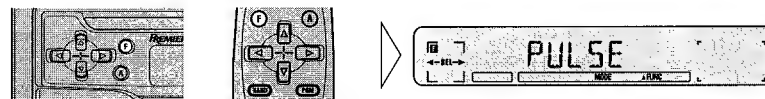
Setting the Selectable Output (Pulse/Constant)

This mode enables you to select a "Constant" output or "Pulsed" output. When connecting a Siren the "Constant" output should be selected. When connecting the horn or lights the "Pulsed" output should be selected.

1. Select your desired output type.

PULSE

2. Advance to next selection.

DR-L CLS
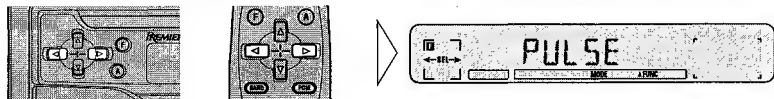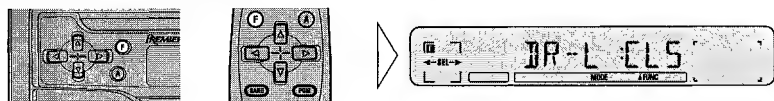
Selecting Door Switching Systems

It is necessary to select the correct "Door System Type" (Negative or Positive switching) for that of your vehicle. Initially, the system is set for vehicles with the grounding type (Negative switching). Select the correct "Door system type" of your vehicle from below.

■ Vehicles to select "DR-L :CLS"

GM, CHRYSLER, EUROPEAN, JAPANESE

■ Vehicles to select "DR-H :CLS"

FORD, JAGUAR, MERCEDES*, etc.

* Some Models Only.

• Select "DR-L :CLS" or "DR-H :CLS" for the correct door system type.
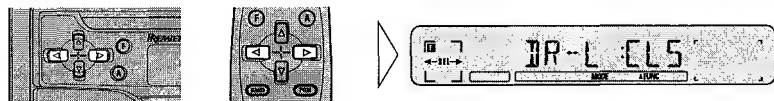
DR-L CLS

■ Door System Confirmation

The door system confirmation feature was incorporated to ensure that the correct door system type has been selected. (eg. Set to "DR-L :CLS" for GM vehicles.)

1. First, close all the doors. If the correct door system type has been selected then the Display will show "DR-L :CLS".
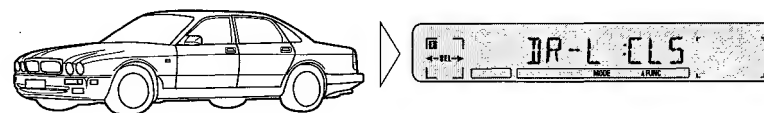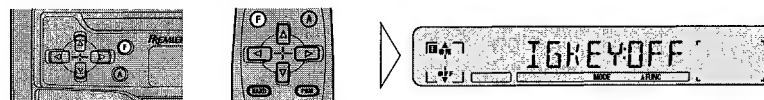
DR-L CLS

If not, select the alternative door system type by pressing the ◄ or ► button. Lastly, confirm each door triggers the Alarm by opening and closing each door.

2. As the door is opened the display should change accordingly ("DR-L :CLS" – "DR-L :OPN").

DR-L OPN

3. Advance to next selection.

IGKEYOFF
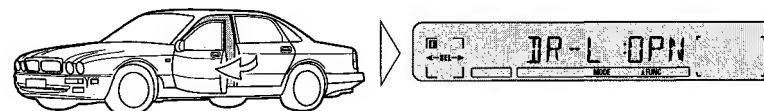
Starter Disable

This function makes it virtually impossible for a would be thief to start your car when activated. This function is initially set "OFF". If a "SPDT" relay, sold separately, is installed it can be used.
The method for disarming the "DFS Alarm" differs on whether or not this function is "ON" or "OFF".

■ **If this function is "ON" or "OFF":**

The "DFS Alarm" can be disarmed if the Detach face is reattached within the "Entry Delay Time".

■ **If this function is "ON":**

The "DFS Alarm" can be disarmed if the ignition key is inserted in the ignition within the "Entry Delay Time", then the key is turned from "OFF" to "ON" 5 times within 1 minute.

■ **If this function is "OFF":**

The "DFS Alarm" can be disarmed if the ignition key is inserted in the ignition and turned from "OFF" position to the "ON" within the "Entry Delay Time".

Note:
• In order for the "DFS Alarm" to operate when a window is broken, connect this unit's White/Red (ALARM SENSOR) lead to glass sensor securely.
• In order for the "DFS Alarm" to operate when a door is forced open, connect this unit's White (DOOR SWITCH) lead securely.

1. **Activate the Starter disable function.**
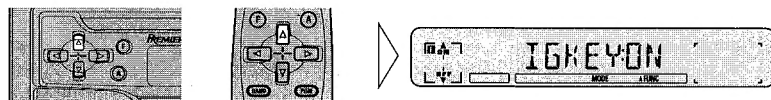
Press the ▼ button to deactivate the Starter disable function.

2. **Advance to next selection.**
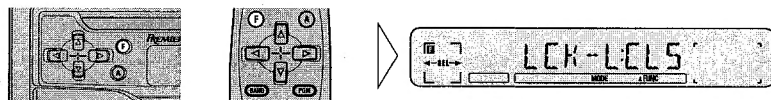
DFS Alarm Function
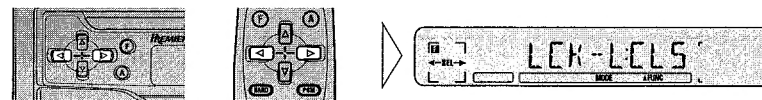
Central Door Lock Systems

The DFS Alarm can be disarmed by Un-Locking the doors with a remote key-less entry system. If the unit's stand-by state is disarmed, the LED's blinking speed becomes faster. (It can be understood if the "DFS Alarm" has been disarmed by the change in the LED's blinking speed.)

Note:
• If the "DFS Alarm" is disarmed by the key-less entry system, it will remain disarmed. To reset, turn the ignition on after reattaching the face, then turn the ignition to the off position and remove the detachable face.
• If your vehicle is equipped with a central door lock but the glass or shock sensor is not connected, if the window is broken and the central door lock is released, this unit's DFS Alarm will not operate.
• Pioneer recommends that both a shock sensor and glass sensor be installed when you are using the "Remote Disarming" feature.

■ **Selecting the Door Lock Type**

• **Select the "LCK-L:CLS" or "LCK-H:CLS" for the correct door lock type.**


■ **Door Lock Confirmation**
The door lock confirmation feature was incorporated to ensure that the correct door lock type has been selected. (eg. Set to "LCK-L:CLS".)

1. **As the doors are unlocked with central door lock system the display should flash "LCK-L:OPN" accordingly.**

If not, select the alternative door lock type by pressing the ◄ or ► button.

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2. Cancel the DFS Alarm Setting Menu.
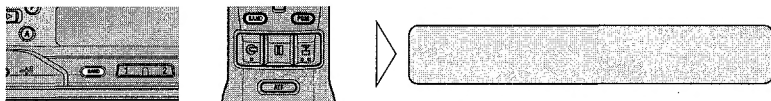

Setting of the "DFS Alarm" is now complete.

Note:
* In the case that the battery is disconnected or the RESET button is pressed, it may be necessary to re-program the DFS Alarm Menu; otherwise this setting needs to be done only once.
* When the DFS Alarm is armed, you cannot disarm it by pressing the RESET button.

Operation of "DFS Alarm"

Providing the installation and setting of the "DFS Alarm Setting Menu" has been performed correctly, operation of the "DFS Alarm" is very simple.

Arming Alarm

To arm your Alarm simply turn off the ignition and detach the front panel. After detaching the front panel the "DFS Alarm" will automatically arm itself after 30 seconds, providing all of the doors are closed. If after 30 seconds, a door still remains open the DFS Alarm will not arm until the last door has been closed. After closing all of the doors, ensure that they are securely locked. The LED indicator on the head unit will flash as a visual deterrent. Your vehicle is now protected by your "DFS Alarm".
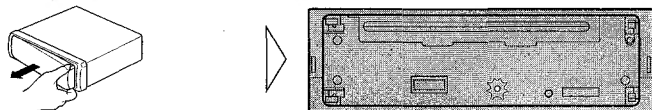
DFS Alarm Function

Disarming Alarm

Upon entering your vehicle, and within the "Entry Delay Time" set within the "DFS Alarm Menu", attach your Pioneer Detachable Face.

■ If you have forgotten the Detachable Face Panel:

If the "Starter Disable" is "ON", insert the ignition key in the ignition within the "Entry Delay Time", then turn the key from "OFF" to "ON" 5 times within 1 minute.
If the "Starter Disable" is "OFF", insert the ignition key in the ignition and turn the key from "OFF" to "ON" within the "Entry Delay Time".

> **CAUTION**
> ⚠ • If the starter motor will not run, the cause may be the DFS Alarm. To check whether the DFS Alarm is the cause, try switching the position of the switch installed according to the "Avoiding Trouble" section of the installation manual.
> • If the DFS Alarm is the cause of the trouble, then the starter motor will run. In this case, confirm DFS Alarm operation in a safe place. If there is no problem, switch the switch back to its original position. If left at the newly switched position, some functions of the DFS Alarm will not operate.
> • If the starter motor will not run after switching the switch, something other than the DFS Alarm may be causing the problem. Have the vehicle checked.

Entry Detection

If the "DFS Alarm" was not disarmed in accordance with "Disarming Alarm", the "DFS Alarm" will be triggered. The "DFS Alarm" will sound for 60 seconds and will repeat 5 times if any door is left open or reopened. After the fifth time the "DFS Alarm" will reset to prevent continuous sounding and prevent your battery from discharging.
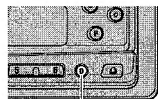
> **Precaution:**
> • Upon returning to your vehicle and before opening any doors, check to see if the LED indicator is still flashing. If the LED is no longer flashing, it indicates that the Alarm as sounded. Disarming, as described above, is still necessary.
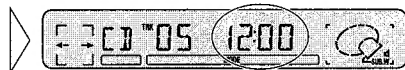
Time Display/Setting

■ **Displaying the Time**
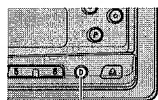
• **To turn the time display ON with the source ON.**
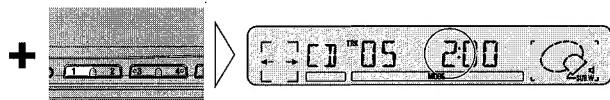

Hold for 2 seconds

The time display disappears temporarily when you perform another operation, but the time indication returns to the display after 25 seconds.

■ **Setting the Hours**

• **While holding down the DISP button for at least 2 seconds, press button 1 to set the hour.**
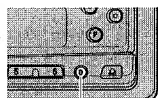

Hold for 2 seconds

■ **Setting the Minutes**

• **While holding down the DISP button for at least 2 seconds, press button 2 to set the minute.**

Hold for 2 seconds

When you release the DISP button, the second count begins from 00 seconds.

Note:
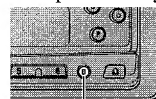• The hour and minute can be advanced by pressing the respective buttons either consecutively or continuously.
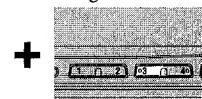
■ **Synchronizing with the Time Announcement**

• **While holding down the DISP button for at least 2 seconds, press button 3 to reset the minute and second indications to zero.**

Example: When synchronizing between 1:30 and 2:29.

Hold for 2 seconds

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Specifications

General

Power source .... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system .... Negative type
Max. current consumption .... 10.0 A
Dimensions
    (DIN) (chassis) .... 178 (W) × 50 (H) × 150 (D) mm
                  [7 (W) × 2 (H) × 5-7/8 (D) in.]
        (nose) .... 188 (W) × 58 (H) × 20 (D) mm
              [7-3/8 (W) × 2-1/4 (H) × 3/4 (D) in.]
    (D)   (chassis) .... 178 (W) × 50 (H) × 155 (D) mm
                  [7 (W) × 2 (H) × 6-1/8 (D) in.]
        (nose) .... 170 (W) × 48 (H) × 15 (D) mm
            [6-3/4 (W) × 1-7/8 (H) × 5/8 (D) in.]
Weight .... 1.4 kg (3.1 lbs)

Amplifier

Continous power output is 20 W per channel min. into 4 ohms. both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output .... 40 W × 4
Load impedance .... 4 Ω (4 – 8 Ω allowable)
Preout output level/output impedance .... 500 mV/1 kΩ
Tone controls
    (Bass) .... ±12 dB (100 Hz)
    (Treble) .... ±12 dB (10 kHz)
Loudness contour ...... +10 dB (100 Hz), +7 dB (10 kHz)
                           (volume: –30 dB)

CD player

System .... Compact disc audio system
Usable discs .... Compact disc
Signal format .... Sampling frequency: 44.1 kHz
                Number of quantization bits: 16; linear
Frequency characteristics .... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ...... 94 dB (1 kHz) (IHF-A network)
Dynamic range .... 90 dB (1 kHz)
Number of channels .... 2 (stereo)

FM tuner

Frequency range .... 87.9 – 107.9 MHz
Usable sensitivity .... 11 dBf
               (1.0 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity .... 16 dBf (1.7 µV/75 Ω, mono)
Signal-to-noise ratio .... 70 dB (IHF-A network)
Distortion .... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response .... 30 – 15,000 Hz (±3 dB)
Stereo separation .... 40 dB (at 65 dBf, 1 kHz)
Selectivity .... 70 dB (2ACA)
Three-signal intermodulation
    (desired signal level) .... 50 dBf
          (two undesired signal level: 110 dBf)

AM tuner

Frequency range .... 530 – 1,710 kHz
Usable sensitivity .... 18 µV (25 dB) (S/N: 20 dB)
Selectivity .... 50 dB (±10 kHz)